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Algemene Praktisynsreeks

DIAFRAGMABREUK

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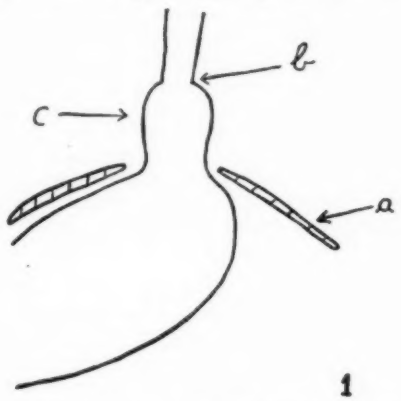
Omdat diafragmabreuk vandag erken word as 'n toestand wat betreklik dikwels voorkom, lastige simptome veroorsaak en tot ernstige komplikasies aanleiding kan gee, is dit ook vir die algemene praktisyn van belang. In hierdie artikel sal hoofsaaklik die breuke deur die esofageale hiatus bespreek word en traumatiese breuke sal net kortliks aangeraak word. Breuke deur aangebore openinge in die diafragma sal nie eers verder genoem word nie, omdat hulle vir die algemene praktisyn van baie min belang is.

ESOFAGEALE HIATUSBREUK

Die oorgrote meerderheid diafragmabreuke val in hierdie groep, waarvan twee anatomiese tipes beskryf word, naamlik, die baie algemene glybreuk deur die esofageale hiatus en die seldsame para-esofageale hiatusbreuk.

Glybreuk deur die Esofageale Hiatus

Die esofagogastriese aansluiting, tesame met 'n kleiner of groter deel van die maagfundus, gly deur die verwyde hiatus opwaarts tot in die mediastinum bokant die diafragma (Afb. 1). Die belangrikste gevolg hiervan is dat die



Afb. 1. Glybreuk deur esofageale hiatus: (*a*) diafragma, (*b*) gastro-esofageale aansluiting bo diafragma met verdwyning van normale hoek tussen esofagus en maag en (*c*) maagfundus wat deur die hiatus opwaarts stoot.

meganisme, wat terugvloei van maagsappe van die maag na die esofagus verhoed, gedeeltelik of volkome belemmer word. Die rede hiervoor is waarskynlik dat die normale esofagogastriese hoek verdwyn wanneer die esofagogastriese aansluiting bo die diafragma lê ('n volle bespreking van hierdie meganisme is nie binne die bestek van hierdie artikel nie). Die terugvloei van maagsappe wat dan wel na die esofagus plaasvind veroorsaak peptiese esofagitis, wat tot oppervlakkige ulserasie met chroniese of akute bloeding kan lei, of bindweefselvorming tot so 'n mate kan uitlok dat vernouing of verkorting van die esofagus kan ontstaan. Die breuksak is gewoonlik met die maagfundus gevul en bevat baie selde enige ander orgaan. Die nek van die sak is wyd en beklemming van derm in die sak is so seldsaam dat dit vir praktiese doeleindes buite rekening gelaat kan word.

Die Kliniese Beeld

'n Siektegeskiedenis soos die volgende word dikwels deur die pasiënt gegee: 'n 55-jarige vrou kla dat sy al verskeie jare lank, veral na maaltye, aan 'n ongemaklike vol gevoel in die epigastrium en aan sooibrand ly. Gedurende die afgelope maande het die klagtes erger geword en sy kla nou oor werklike pyn in die epigastrium en agter die onderste deel van die sternum, wat soms ook na die rug toe deurstraal. Hierdie simptome is opvallend erger na 'n groot maal, maar word nie soseer deur 'n bepaalde kossoort uitgelok nie. Sy merk ook op dat die simptome erger is as sy vooroor buk of plat op haar rug of regtersy lê, maar dat sy minder las het as sy met haar kop hoog slaap. Alkaliese middels gee soms tydelike verligting, veral van die sooibrand. Behalwe hierdie klagtes breek sy dikwels winde tesame met suur vog of maaginhoud op. Sy is verskeie kere al vir peptiese ulserasie behandel met net tydelike en onvolkome verligting van simptome.

Die toestand kom meer dikwels in persone oor die ouderdom van 45 jaar voor, maar is nie seldsaam in jong volwassenes en kinders nie en word ook soms in babas gevind. In meeste reekse gevalle is gevind dat vrouens meer dikwels as mans aan hiatusbreuk ly. Hiatusbreuke word soms by bariumondersoeke gevind sonder dat die pasiënt klagtes het wat daaraan gekoppel kan word. Tog is dit waarskynlik dat die meeste breuke vroeër of later simptome sal veroorsaak. Oor die algemeen is die simptome erger met groter breuke, maar uitsonderinge kom dikwels voor en klein breuke kan soms simptome veroorsaak wat buite verhouding tot die grootte van die breuk is.

Hoewel die belangrikste klagtes in bostaande siektegeskiedenis aangedui is, word die moontlike simptome hier volledig opgesom: Dikwels is die pasiënt al jare lank van die simptome bewus, maar omdat sy hulle gewoonlik as ‚winderig-

heid' of ‚sooibrand' of ‚slegte spysvertering' afgeskryf het, het sy nie die dokter juis daaroor geraadpleeg nie. Selfs die dokter is dikwels geneig om die simptome as onbenullig te beskou.

Sooibrand, d.w.s. 'n brandgevoel agter die sternum en tot in die keel op, wat soms met 'n suur smaak gepaard gaan, is 'n baie algemene klagte in hierdie verband—'n klagte wat ook kenmerkend deur 'n groot maal of deur plat te lê of vooroor te buk vererger word. Daar word dikwels oormatig baie wind opgebreek, soms met 'n suur vog of maaginhoud.

Winderige dispepsie is dikwels teenwoordig en verklaar waarom die toestand hom soos galblaassiekte voordoen. Werklike pyn verskyn gewoonlik later en is waarskynlik 'n aanduiding van esofagitis. Die pyn word hoog in die epigastrium en retrosternaal gevoel en straal soms deur na die rug toe of selfs na die linkerskouerblad of arm; dit is ook gewoonlik erger na 'n groot maal en word deur posisie beïnvloed soos met sooibrand die geval is.

Vomering of regurgitasie van kos kan in ongekompliseerde gevalle voorkom, maar is meer kenmerkend van gevalle met esofagitis omdat daar dan as gevolg van edeem en spasme, of fibrotiese vernouing, werklike obstruksie van die onderste end van die esofagus kan wees.

Slukbesware is gewoonlik 'n aanduiding van komplikasies, maar kan af en toe in ongekompliseerde gevalle ook gevind word. Met kwaai esofagitis kan daar selfs sonder fibrotiese vernouing die gevoel wees dat die kos retrosternaal vassit. Met fibrotiese vernouing is die slukmoeilikheid gewoonlik erger, en dikwels toenemend.

Bloedverlies kan plaasvind as gevolg van sypeling vanaf die ontstoke esofageale slymvlies of opening van bloedvaatjies deur die oppervlakkige ulserasie wat die gevolg van esofagitis kan wees. Die herhaalde verlies van klein hoeveelhede bloed kan aansienlike anemie by die pasiënt veroorsaak. Meer akute bloeding kan hematemese of melena veroorsaak, wat in buitengewone gevalle erg genoeg kan wees om die lewe van die pasiënt in gevaar te stel.

Terwyl verskillende van die bogenoemde simptome die geneesheer op die spoor van die hiatusbreuk behoort te bring, is die volgende van besondere belang omdat hulle dringend waarsku dat daar waarskynlik aktiewe esofagitis is wat die gevaar van bloeding en van fibrotiese vernouing inhou: Kwaai epigastriese of retrosternale pyn wat gedurig bly of erger word; hematemese of melena, of algemene moegheid as gevolg van anemie; vomering en slukbesware.

Ondersoek van die pasiënt mag moontlik anemie of gewigsverlies toon hoewel die meeste pasiënte heeltemal gesond lyk. Ondersoek van die buik en borskas lewer gewoonlik geen positiewe tekens op nie, maar mag van waarde wees om ander patologiese toestande aan te dui.

Spesiale Ondersoeke

Roentgenologiese ondersoek is die belangrikste spesiale ondersoek. Gelukkig is die moderne roentgenoloog goed op hoogte van die toestand. Trouens, dit is tot 'n groot mate aan hom te danke dat diafragmabreuke deesdae as 'n betreklike gewone toestand beskou word. Geen bariummaal-ondersoek word as volledig beskou as daar nie spesiaal na 'n hiatusbreuk gesoek word nie. Behalwe die gebruik van die Trendelenburg-posisie pas die roentgenoloog ook dikwels druk op die bobuik toe om die diafragmabreuk makliker aan te dui. Roentgen-ondersoek dui nie net die teenwoordigheid van die breuk aan nie, maar onderskei gewoonlik tussen die anatomiese tipes.

Esofagoskopiese ondersoek is dikwels nodig, nie alleen omdat dit in twyfelagtige gevalle mag help om vas te stel of die simptome aan 'n diafragmabreuk toegeskryf moet word nie, maar ook omdat komplikasies soos esofagitis en vernouing langs hierdie weg beter beoordeel kan word.

Diagnose

Diafragmabreuk word dikwels oor die hoof gesien omdat die simptome vaag of onbeduidend skyn te wees, of aan die meer bekende oorsake van dispepsie toegeskryf word. Die belangrikste toestande wat met diafragmabreuk verwar kan word is die volgende:

Peptiese ulserasie van die maag of duodenum. Die pyn wat met maaltye verband het, wat soms in die nag erger is en wat tydelik deur alkaliese middels verlig word, is baie soortgelyk aan die van peptiese ulserasie. Met peptiese ulserasie is die verband tussen pyn en maaltye dikwels meer duidelik en meer konstant as met hiatusbreuk, maar met laasgenoemde is die invloed van die posisie van die pasiënt op die simptome meer opvallend. 'n Bariummaal-ondersoek behoort die onderskeiding maklik te maak. Hier moet ook bygevoeg word dat peptiese ulserasie van die duodenum en diafragmabreuk soms albei in dieselfde pasiënt teenwoordig is.

Galblaassiekte kan omrede van sy simptome van winderige dispepsie soortgelyke klagtes as die van hiatusbreuk veroorsaak. 'n Duideliker verband met vetterige kossoorte, soms tipiese galkoliekaanvalle, en drukgevoeligheid in die regterbobuik dui meer op die galblaas as oorsaak van die klagtes. Cholesistogram- en bariummaal-ondersoeke behoort die diagnose duidelik te kan stel. Hier moet weer op die moontlikheid dat albei hierdie toestande saam gevind kan word, gewys word.

Koronêre vaatsiekte met ischemie kan vanweë die retrosternale pyn met uitstraling na die linkerskouer of arm deur hiatusbreuk nageboots word. Die verband van die pyn met inspanning by koronêre vaatsiekte en elektrokardiografiese en bariummaal-ondersoeke los die diagnostiese moeilikheid op.

In pasiënte met chroniese hipokromiese anemie moet hiatusbreuk as 'n moontlike oorsaak van die bloedverlies oorweeg word. In pasiënte met hematemese of melena is dit ook belangrik om hiatusbreuk as moontlike oorsaak in gedagte te hou, ten spyte van die feit dat dit 'n minder belangrike oorsaak is.

In babas en klein kinders presenteer hiatusbreuk dikwels met regurgitasie of braking, wat misleidend kan wees omdat daar soveel ander oorsake van braking in babas is.

Prognose

Hoewel sommige diafragmabreuke geen simptome of komplikasies veroorsaak nie, is dit waarskynlik dat die meerderheid uiteindelik tot lastige simptome en tot komplikasies kan lei. Chroniese en akute bloedverlies kan soms gevaarlik word. Die ernstigste komplikasie is egter fibrotiese vernouing wat kwaai slukbesware kan veroorsaak en dikwels 'n uitgebreide en ernstige operasie vereis. Hierdie feit is uiters belangrik omdat operatiewe behandeling voor die ontstaan van fibrotiese vernouing veilig is en goeie resultate lewer, terwyl operasie vir 'n kwaai fibrotiese vernouing gevaarlik is en soms maar 'n onsekere resultaat in die vooruitsig stel.

Behandeling

Klein asimptomatiese glybreuke vereis nie noodwendig behandeling nie, maar die pasiënt behoort gewaarsku te word om die geneesheer weer te raadpleeg as simptome verskyn.

Konserwatiewe behandeling behoort alleen toegepas te word wanneer die simptome gering is en operasie weens hoë ouderdom, hartkwaal of swak asemhalingsfunksie gevaarlik geag word. Die volgende is die belangrikste punte in die konserwatiewe behandeling: Kleiner maaltye, wat liewer nie later as 2 of 3 uur voor slaaptyd genuttig word nie; slaap in die sittende of half-sittende posisie om terugvloei te verminder; alkaliese middels om maagsappe te neutraliseer; probanthine of soortgelyke middels om maagsapafskeiding te verminder; gewigsvermindering in vet pasiënte, wat ook van groot belang is waar operatiewe behandeling toegepas word.

Operatiewe behandeling behoort vir die meerderheid van hiatusbreuke, wat simptome veroorsaak, toegepas te word. Phrenicus-verlamming wat vroeër as palliatiewe maatreël aanbeveel is, word deesdae verwerp.

Direkte herstel van die verwyde hiatus met terugplasing van die gastro-esofageale aansluiting in sy normale ligging onder die diafragma, is tot kort gelede as die enigste aanneemlike soort operasie beskou. Hierdie doel kan bereik word deur 'n abdominale toegang na die onderkant van die diafragma of deur 'n torakale toegang na die bokant daarvan.

Die voordele van die abdominale toegang is: Deeglike ondersoek van die buikorgane kan gedoen word en siektetoestande in die buik kan gewoonlik terselfdertyd herstel word; longkomplikasies is waarskynlik minder en interkostale neuralgie, wat af en toe na torakotomie lastig kan wees, kom nie voor nie. Die nadele van die toegang is: die blootlegging en doeltreffende herstel van die esofageale hiatus is gewoonlik van onder af, veral in vet pasiënte, veel moeiliker as van bo af; in gevalle met peri-esofagitis en verklewings aan die mediastinale strukture, kan blinde mobilisasie van die esofagus skade aanrig.

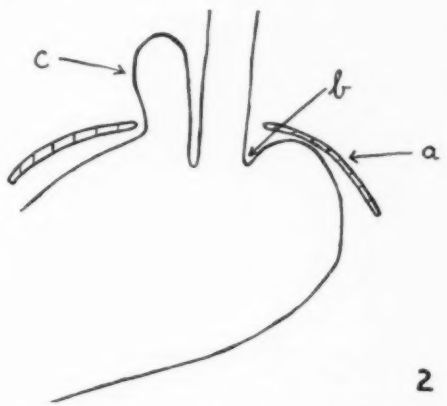
Die torakale toegang het die groot voordeel dat die blootlegging van die hiatus makliker is as van onder af en die kanse op bevredigende herstel derhalwe beter is. Die nadele van hierdie toegang is: 'n Deeglike ondersoek van die buikorgane kan nie gedoen word nie (selfs waar daar in die diafragma 'n opening gemaak word nie) en siektetoestande soos galstene vereis dan 'n tweede operasie; na-operatiewe pyn is gewoonlik erger as met die abdominale toegang en torakale komplikasies waarskynlik 'n bietjie meer gewoon; interkostale neuralgie kan in enkele gevalle erg lastig wees.

In die afgelope paar jaar is daar in Switserland deur Nissen[1] en in Nederland deur Boerema[2] onafhanklik gewerk aan 'n operatiewe tegniek wat die maag aan die voorste buikwand anker. Die bedoeling van die operasie is om deur afwaartse trekking van die klein boog, die maag en gastro-esofageale aansluiting in die buik terug te bring, en dit dan daar te hou deur die klein boog onder heelwat spanning aan die voorste buikwand te fikseer. Nissen beskou hierdie eenvoudige prosedure as voldoende om die gastro-esofageale aansluiting in sy normale posisie te hou en sodoende die pasiënt se simptome te genees. Boerema beskou mobilisasie van die esofagus in die hiatus as 'n noodsaaklike stap voordat fiksasie aan die voorste buikwand gedoen word, en verkies om waar moontlik ook die hiatus self te vernou. Albei maak aanspraak op veel beter resultate as wat hulle voorheen met ander metodes gekry het. Die metode staan dus tot die beskikking van die chirurg, maar die finale beoordeling daarvan sal nog 'n paar jaar moet wag.

Operatiewe behandeling van hiatusbreuk voordat fibrotiese vernouing en verkorting van die esofagus plaasgevind het, lewer goeie resultate op met genesing van die esofagitis en die sterftesyfer is klein. Nadat fibrotiese vernouing en verkorting plaasgevind het, moet òf herhaalde dilatasie òf 'n uitgebreide operasie soos esofagojejunostomie gedoen word, met 'n heelwat hoër sterftesyfer en 'n minder sekere vooruitsig vir genesing. *Operatiewe behandeling moet dus voor hierdie ernstiger stadium gedoen word.*

Para-esofageale Hiatusbreuk

Hier bly die gastro-esofageale aansluiting onder die diafragma en die hoek tussen maag en esofagus bly normaal (Afb. 2). Die maag stoot in die breuksak *langs die esofagus op;*



Afb. 2. Para-esofageale hiatusbreuk: (*a*) diafragma, (*b*) gastro-esofageale aansluiting onder diafragma met normale skuins-inplanting van esofagus in maag en (*c*) maag wat langs esofagus opwaarts stoot deur hiatus.

in gevorderde gevalle kan byna die hele maag in die sak wees. Die meganisme wat terugvloei van maagsappe na die esofagus verhoed is onaangetas en terugvloei vind dus nie plaas nie.

Die klagtes van die pasiënt is dikwels nie baie kenmerkend nie, maar sluit nie sooibrand en eruktasie in nie. Volheid na ete, ongemak in die epigastrium, slukbesware, bloedverlies, hartkloppens en kortasemigheid kan voorkom. Die diagnose berus op die roentgenologiese bevindings.

Die toestand is betreklik buitengewoon, en selfs waar dit roentgenologies gediagnoseer word, word dit soms saam met die gly-tipe gevind. Die behandeling is operatief, soos met die gly-tipe breuk.

Traumatiese Diafragmabreuk

Die diafragma kan deur indringende wonde soos messteke of koeëlwonde beseer word (wanneer daar dikwels ook beserings van ander viscera is) of dit kan deur uitwendige beserings soos saampersing van die buik of die toraks ontstaan. Omrede van die gepaardgaande beserings is die pasiënt dikwels erg geskok en kan die tekens van die diafragmabesering verberg word. Verminderde lugtoegang by die longbasis met opvallend harde dermklanke in die toraks kan soms die aandag op die moontlikheid van diafragmabreuk vestig. Roentgenfoto's sal gewoonlik die diagnose beklink.

Soms herstel die pasiënt sonder operasie en is hy nie bewus van enige besering van die diafragma nie. Simptome van subakute of akute dermobstruksie mag ontstaan. Die diagnose is moeilik, maar die geskiedenis van 'n vorige besering tesame

met roetgenologiese ondersoeke sal waarskynlik die breuk aandui. Operatiewe herstel van die breuk is die enigste korrekte behandeling. Gewoonlik is die torakale toegang verkieslik waar die diagnose vooraf gemaak is, omdat dit makliker is om verklewings aan omliggende strukture in die toraks langs hierdie weg los te maak.

VERWYSINGS
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POSSIBLE SIMPLIFIED GRAVIDITY TECHNIQUE FOR DETECTING PHYSIOLOGICAL RESISTANCE OF *ANOPHELES GAMBIAE* TO BHC*

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In the Lowveld of the Transvaal it is virtually impossible in 24 hours to collect adequate numbers of *Anopheles gambiae* (the local vector of malaria) for Busvine tests. We therefore devised a new rationale for detecting physiological resistance to BHC, the residual insecticide which is employed for the spraying of Bantu huts.

It is well known that *A. gambiae* completes ovulation inside huts. If she is physiologically resistant to BHC, she will continue to complete ovulation indoors, without being killed by this residual insecticide.

Our findings are published, because after further investigations, this simplified technique might possibly be used for detecting physiological resistance in other parts of the world.

Technique

Huts which have been sprayed with BHC in the Nelspruit sub-region during October 1957, as well as unsprayed earthen holes (and dongas) in river banks in the same sub-region, and unsprayed huts in the Nylstroom sub-region, were check-sprayed with pyagra from 10 a.m. to 4 p.m. during March 1958 for gravidity data for detecting resistance.

Results

Collected data are summarized in Table I.

TABLE I. GRAVIDITY DATA: 10 A.M. — 4 P.M.: MARCH 1958

Resting Sites	*Number of Resting Sites*	*Males*	*Females*				*Total Females*
			Unfed	*Fed*	*Half-gravid*	*Fully-gravid*	
Holes and dongas ..	253	39	16	14	5	0	35
Unsprayed huts ..	135	37	12	30	39	58	139
BHC-sprayed huts ..	1,041	47	66	60	9	0	135

1. *Earthen Holes and Dongas.* During the month the Nelspruit field staff only found 35 females in earthen holes (and dongas) along rivers where *gambiae* breeds. This shows how impossible it is to collect enough females for Busvine tests in the field during one day. This total of 35 females, compared with the 39 males, is of interest as yielding a sex ratio of 1 : 1. Absence of fully-gravid females between 10 a.m. and 4 p.m. indicates that *A. gambiae*, at least in earthen holes, becomes fully-gravid during the night, and oviposits before 10 a.m.

2. *Unsprayed Huts.* It is instructive that 58 fully-gravid females were found in unsprayed huts between 10 a.m. and 4 p.m., whereas no fully-gravids were discovered in earthen holes. The ecology of females which shelter or feed in unsprayed huts, therefore, apparently differs markedly from the ecology of those in earthen holes. In the domestic economy of *A. gambiae*, a hut is apparently more profitable than an earthen hole; possibly because goats, cattle and domestic animals daily provide blood meals more regularly and during longer periods.

3. *BHC-Sprayed Huts.* In 1,041 BHC-sprayed huts, from a total of 135 females, no fully-gravid females were found; whereas in unsprayed huts a total of 139 females yielded 58 fully-gravids. Dead *gambiae* were found in BHC-sprayed huts; and because, as far as we know, the literature has no record of repellent effect of BHC, we assume that females were killed by the BHC before they could become fully-gravid.

Absence of Physiological Resistance

Considering the fact that not a single fully-gravid *A. gambiae* was found in any of the 1,041 BHC-sprayed huts, we must assume that the BHC had killed the females before they could complete ovulation. We therefore conclude that during March 1958, in the Nelspruit sub-region, there was no physiological resistance of *gambiae* to BHC.

Absence of Behaviouristic Resistance

Because dead *gambiae* were found in BHC-sprayed huts, and considering the considerable ratios of males and unfed, fed, and even half-gravid females, it appears that during March 1958, in the Nelspruit sub-region, there was no behaviouristic resistance of *gambiae* to BHC.

Duration of Effective BHC

From the data it appears that, even 6 months (October 1957 to March 1958) after application, the residual effect of BHC was still adequate.

Recommendation

We recommend that before and during malaria eradication campaigns, this simplified technique, together with Busvine tests, should be employed for detecting physiological resistance.

SUMMARY

As *Anopheles gambiae* completes ovulation indoors, the presence of fully-gravid females in BHC-sprayed huts would indicate physiological resistance.

Gravidity data from earthen holes and dongas, unsprayed huts, and BHC-sprayed huts, obtained by checking with pyagra, are analysed and discussed. Physiological resistance was absent.

This simplified technique (together with Busvine tests) is recommended for detecting physiological resistance.

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EDITORIAL : VAN DIE REDAKSIE

PRACTICAL ASPECTS OF BLOOD TRANSFUSION SERVICES

The world's first civilian blood bank was established at County Cook Hospital, Chicago, USA, in 1936. Before this it was only for a limited period during the 1914-1918 War that blood had been collected in transportable containers which could be stored until required.

The organization of a transfusion service of this type was dependent on the outcome of investigations carried out in diverse fields. These investigations possibly started with Harvey's lectures (1616) on the circulation and Blundell's observation (1818) that human blood was more effective for the treatment of man than blood of animal origin. In recent times there have been the landmarks of Landsteiner (1900), who discovered the existence of different blood groups in man and demonstrated in the laboratory that blood from one person may be incompatible with that of another; of the announcement during 1914 that sodium citrate was a non-toxic substance which would prevent clotting of blood placed in containers; of Rouse and Turner (1916) who found a means of considerably enhancing the life of stored blood cells by adding dextrose and other preservative materials to control ezymatic action; and of Robertson who transported, stored and transfused blood in army casualty-clearing stations during 1916-1918.

Today, barely twenty years since the organization of the first hospital blood bank, transfusion services and blood banks have multiplied a thousand-fold throughout the world. Therapeutic transfusions have become part and parcel of most branches of medical practice. The initial impulse for this great increase in blood-transfusion activity was to be found in the Second World War. Under the stimulus of national emergency the money and research facilities required were made available and the large-scale collection of blood for anticipated civilian casualties was rendered easy by a new awareness of the importance of the blood donor.

Various factors ensured that blood banking would be a continued feature of post-war medical practice. Many medical men, during their period of military service, became familiar with the clinical and technical aspects of transfusion. More important, perhaps, was the fact that blood, deviated to ordinary civil hospitals when war-time casualties did not amount to the expected figure, was readily available and was used in rapidly increasing amounts, so that for the first time the advantages of transfusion were clearly demonstrated.

The development of new surgical operations, such as those on the heart, which are entirely dependent on the supply of enough safe blood, and the increasing use of irradiation therapy supported by blood transfusion, have helped to increase the demand for blood.

The increasing activity and the continued advance in blood-group study, which is taking place today, is bringing with it a considerable body of knowledge, not all of which deals with the understanding and treatment of disease. The fields of genetics and anthropology, and of fundamental serology and immunology have been invaded and have gained much from the work of those who study blood groups. It is not surprising, therefore, that the average practitioner, and even many a pathologist, is bewildered by this rapidly expanding and generously documented speciality —even if he does make the effort to break through the barrier of the transfusionist's tribalistic language and cult of symbols!

The fact remains that the average medical practitioner (and this applies in full measure to South Africa), whether he is engaged in general or in specialist practice, in the city or in the country, will sooner or later, of necessity, if he has his patients' welfare at heart, have recourse to the transfusion of blood. It is as well, then, to realize that this procedure is associated with very definite legal responsibilities which can be adequately discharged only in the light of knowledge and understanding of certain basic facts.

As stated by Gordon, Turner and Price[1] 'Patients who have received incompatible transfusions may develop an acute haemolytic reaction and death may ensue. The patient may, however, recover from the immediate effects of the haemolytic reaction and may develop a lower nephron nephrosis with subsequent death from uraemia.

'A Rh negative mother, who has developed anti-Rh agglutinins during pregnancy, may suffer a serious haemolytic reaction should she be the recipient of a Rh positive blood transfusion. Similarly, should anti-Rh agglutinins have developed in the maternal blood prior to pregnancy, these antibodies may react with the foetal cells and will therefore adversely affect pregnancy.

'Medical Officers responsible for blood transfusions should be aware that negligence in carrying out the grouping tests may involve them in culpable homicide charges.'

Compatibility tests or cross-matching are designed to prevent the transfusion of incompatible blood, and it may well be decided that a medical practitioner, who transfuses blood without previously performing such a test, or fails to have such a test carried out on his behalf by a reputable laboratory, has not taken reasonable precautions to safeguard the patient and is, therefore, guilty of culpable negligence.

Cross-matching tests may be elaborate affairs. In a patient who has immune antibodies, possibly a result of previous transfusions, it may be a procedure lasting two or three hours and employing very special reagents such as digestive enzymes, specially prepared animal sera, and purified protein fractions. When time and circumstances allow the performance of such elaborate tests, blood transfusion becomes virtually a perfectly safe procedure, although, as Discombe[2] points out in his monograph, which should have a place in every hospital side-room, we have not quite reached the stage where the legal phrase *res ipsa loquitor*, 'the thing

speaks for itself', is accepted by the courts. If it were so accepted as applying to blood transfusion, then any harmful consequence following upon the transfusion of blood would in itself be such strong evidence of negligence that the onus would fall on the giver of the transfusion to demonstrate that he was not negligent, while the prosecutor or the plaintiff, to succeed in a legal action, need not bring any evidence other than that the harm followed upon the transfusion.

The problem of safety in connection with transfusion and cross-matching tests arises from the fact that many patients need the blood quickly. This is particularly the case with the great majority of transfusions given in country areas, where, moreover, skilled laboratory assistance is often not available. It is under these awkward circumstances that more simple compatibility tests must be used, the type of test being determined on clinical considerations such as the degree of urgency and a history of previous transfusions or maternal immunization.

Although the exercise of reasonable care is to some extent dependent upon such factors as the amount of time which can be devoted to pre-transfusion tests, the range of blood available, laboratory equipment, reagents, and available assistance, knowledge and insight into the technical and serological aspects of blood grouping remain the first requirements for the practitioner who prescribes blood for his patient.

It is indeed fortunate that a knowledge of some very simple facts will suffice for the technical requirements of a very large proportion of all blood transfusions. The same basic knowledge will also serve to distinguish the small proportion of cases which require more elaborate technical tests. It is therefore possible for the giver of transfusions to avail himself, with a relatively small effort, of that practical knowledge of blood groups and blood transfusion which will place within his reach the ability to exercise reasonable care in the selection and administration of blood.

It is with these considerations in mind that one welcomes the publication of the revised edition of the Medical Research Council Memorandum No. 36 *The Determination of the ABO and Rh (D) Blood Groups for Transfusion* which receives favourable review elsewhere in the *Journal*.[3]

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ASPEKTE VAN OORGEWIG

Die probleem van oorgewig bly helaas nog steeds met ons as 'n moeilike probleem om te hanteer. Baie pasiënte het, meer as vroeër, bewus geword van die moontlike verband tussen lewensverwagting en oorgewig, en meer bepaald van die moontlike verband tussen sekere soorte hartsiekte en oorgewig. Die feit dus dat hartsiekte gedurende die laaste aantal jare so 'n belangrike oorsaak van sterfte geword het, neig om die belangrikheid van oorgewig as ‚toestand' ook te laat toeneem.

Wat die veroorsaking van oorgewig betref, is daar natuurlik twee groot faktore wat in aanmerking geneem moet word: Eerstens is daar die faktor van die hoeveelheid voedsel (kalorieë) wat verorber word, en tweedens is daar die faktor van wat die liggaam met daardie voedsel maak.

Wat die laasgenoemde punt betref—die kwessie van metabolisme—sou 'n mens kon sê dat dit wel aangeneem word dat daar belangrike konstitusionele verskille bestaan tussen mense en dat daar wat betref vertering, absorbering en utilisering van voedsel groter reste en meer vermorsing by sommige persone voorkom as by ander. Dieselfde skaalgewig van voedsel sal dus nie noodwendig dieselfde toename in liggaamsgewig by twee persone veroorsaak nie.

Wat die eersgenoemde punt betref—die hoeveelheid voedsel gebruik—bly dit in die algemeen tog waar dat oorgewig die resultaat is van die neem van oortollige voedsel. Dit is dus belangrik om te weet waarom sommige mense meer eet as ander mense.

Eerstens sou ons kan sê dat daar hier ook konstitusionele faktore aan die werk is. Sommige mense is altyd honger en kan ter eniger tyd 'n groot aptyt opwerk deur net aan kos te dink. Verder dra maatskaplike gewoontes en lewensmilieu by tot die hoeveelheid wat mense eet. Gewoontes soos die drink van alkohol en rook beïnvloed aptyt. En laastens is daar interessante sielkundige persoonlikheidverskille wat in aanmerking geneem moet word.

Suczek[1] se studie oor sielkundige aspekte van gewigsverlies by vrouens het dit byvoorbeeld aan die lig gebring dat daar 'n neiging is by vet vrouens om oorheersende persoonlikhede te hê. Hierdie vrouens se houdings oor hulself toon byvoorbeeld belangrike beklemtoning van ‚sielkundige' krag, hipernormaliteit, narcissistiese trots en 'n ontkenning van swakheid. Hierdie persone vorm die direkte teenvoeters van die geïnhibeerde, teruggetrokke soort persoon wat aan chroniese onsekerheid en spanningstoestande ly en wat sleg slaap en nog slegter eet. Dikwels, alhoewel nie altyd nie, is dit die latente of duidelike wellusteling wie se persoonlikheid gekenmerk word deur neigings tot oorheersing.

Al hierdie oorwegings is belangrik by die behandeling van die probleem van oorgewig en ons wil dit hier duidelik stel dat 'n nuwe benadering tot hierdie probleem nodig is. Verslankingsdiëte en mediese middels wat eetlus onderdruk is nie genoeg nie. Ons moet die hele mens met sy konstitusionele aanleg, sy gewoontes en sy persoonlikheid in aanmerking neem. As algemene beginsels by die behandeling van oorgewig, sou ons dus die volgende kon neerlê:

1. Onthou dat daar wye variasie is van wat fisiologies normaal is.

2. Moenie 'n fetisj van oorgewig maak nie. Dikwels is 'n mens se weldadige voorkoms 'n aangename faset van sy persoonlikheid. Help hom om dit as sodanig te aanvaar met insig, liewers as om hom in 'n suurknol te verander.

3. As die probleem van oorgewig aan die morbiede en abnormale grens, moet verslankingsdiëte en mediese middels wat die eetlus onderdruk wel voorgeskryf word; maar daar moet ook onthou word dat hierdie benadering alleen nie genoeg is nie. Verslankingsdiëte en medisyne sal min vermag as ons nie ook rekening hou met die basiese persoonlikheidseienskappe van die man van baie ponde (gewig) nie.

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PROLAPSE OF THE UTERUS IN PREGNANCY

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Uterine and vaginal prolapse in pregnancy are comparatively rare. Only 192 cases have been described up to the present time, besides 1 complete and 2 incomplete case records. In most of these cases the reports were brief and the degree of severity of the condition was not properly assessed. Furthermore no comprehensive appraisal of the condition from the onset of pregnancy to the stage of postpartum involution has been published.

In pregnancy gross hypertrophy of the cervix may occur. This is also found in prolapse and it may be difficult to differentiate one condition from the other. The custom of describing prolapse in 3 degrees should be adhered to in describing the condition in the pregnant state. Most records describe cases of the first degree, some of the second, and case descriptions of procidentia in the literature are rare although Keettel[3] states that procidentia occurs up to the 7th month of pregnancy.

Prolapse does not seem to affect fertility adversely (Conant[1]), despite statements by authors like Stabler.[2] According to Keettel,[3] Kibel[4] and Vigilante and Bellinger[5] the incidence of the condition is one in 10,000-15,000 pregnancies, being 4-5 times more common in multiparous than primiparous women. In most of the reported cases pregnancy occurred in patients already suffering from prolapse. While it is held that previous pregnancies were responsible for the state of prolapse, the degree of multiparity does not seem to have any bearing upon its incidence, nor do previous forceps deliveries. Stabler and other consider any sudden strain during pregnancy, e.g. defaecation, a precipitating cause of venous stasis and thus of acute oedema of the cervix with extrusion in a few hours. It is, however, possible that there may be other unexplained factors.

Prolapse cannot occur during pregnancy unless there is relaxation and tearing of the structures which support the uterus, together with softening and elongation of ligaments and tissues such as the lateral cervical, pubocervical and uterosacral ligaments, the fascia of the pelvic floor, vaginal and perineal tissues, and possibly the round ligaments. Marked cervical changes follow secondarily on impaired venous return and exposure. These changes, which are due to hypertrophy and engorgement, a tendency for erosions to develop, and infection, cause gross enlargement of cervical tissues. These changes, moreover, may occur very quickly, even within a few hours or days.

The condition of descensus with its annoying and even incapacitative consequences can be expected to occur up to approximately the 12th week, when pregnancy has advanced far enough to lift the uterus out of the pelvis and the cervix into the vagina, but there are rather frequent exceptions. It usually lasts until the stage of labour, which is usually easy. There is a tendency for the condition of prolapse to recur after labour, when it is often worse than before.

The onset of prolapse is often sudden. Most writers feel that sudden strain is the precipitating factor, but we do not confirm this. In no recorded case was the onset associated with shock; medical aid was often not even sought for varying periods of time until the prolapse had become incapacitating or too painful (case 1). Prolapse often recurs repeatedly during the first 12 weeks of pregnancy and it may become irreducible. The fundus is sometimes lower than expected, but it is difficult to judge this before the 12th week, and the cervical protrusion with purple discolouration may be seen at the vulva.

Prolapse of the uterus in pregnancy can be divided into 4 clinical types, in order of frequency:

1. Cases with an early onset. These usually occur in association with pre-existing prolapse. In these cases remission is usually maintained after the uterus is lifted out of the pelvis.
2. Cases in which prolapse may persist throughout pregnancy. This is a rare group.
3. Cases which occur late in pregnancy.
4. Cases in which the uterus is pushed down, e.g. in the one case of ectopic pregnancy which developed a prolapse at the 16th week and which was only discovered at the 36th week, described by Morgan and Keevel.[6]

OBSTETRICAL COMPLICATIONS

Few conditions have so many possible obstetrical complications as prolapse of the uterus in pregnancy:

1. *Infertility*, which seems to occur only when prolapse is so marked that coitus is difficult, so that seminal pooling is impossible, or where chronic cervicitis exists. One patient, a religious objector to operation, had 4 successive pregnancies with a second-degree prolapse existing throughout.
2. *An increased abortion risk*, estimated at 15% by Gaetone and Labriola,[7] thought to be due to cervical stasis and injection or temperature changes.
3. *Urinary difficulty* with severe infection (case 1).
4. *Irreducibility or incarceration of the uterus* possibly with urinary retention (case 2).
5. *Premature delivery*.
6. *Cervical dystocia*, which according to Stander[8] often arises in prolapse occurring in late pregnancy, or when the prolapse was neglected, or when it is persistently present.
7. *Puerperal infection*, which was the cause of 8 of the 9 reported maternal deaths.
8. *The high rate of foetal mortality* which is described—up to 22% in Keettel's series.[3]
9. *The danger of inanition* which may result from possibly prolonged bed rest.
10. *Unexpected postpartum prolapse* (case 3).

It must be emphasized that most of these complicating factors may be avoided by early adequate treatment before and during pregnancy.

REVIEW OF LITERATURE

Keettel[3] in 1941 analysed the 170 cases described to that date. Complete records existed in 140 cases; of these 124 were collected by Franke in 1892 (quoted by Keettel[3]). In Keettel's series treatment ranged from radical during the early days, to conservative in later times.

In 1911 Findlay[9] advised therapeutic abortion and vaginal repair if the patient was incapacitated and if bed rest failed to control the condition, while Harris in 1912, quoted by

Keettel,[3] advocated Porro-Caesarean section. Keettel recommended symptomatic conservative treatment with spontaneous delivery and he advised Dührssen's incisions if necessary or low forceps application; and in 1941 Stander[8] recommended therapeutic abortion for incarceration. The methods of delivery in Keettel's collected cases were spontaneous in 35% of cases, forceps deliveries in 23%, Dührssen's incisions in 30%, version and extraction in 4%, craniotomy in 8%, and Porro-Caesarean section in 1%. There was a foetal death rate of 22% (due to operative intervention, prolonged labour and prematurity), frequent prematurity, and 14 cases of severe maternal sepsis with 8 deaths (before 1911 there were 6 such deaths with a 5% mortality rate and during the period 1911-1940 there was a mortality rate of 14%). One other maternal death was due to uterine perforation. The mortality rate for the whole series was 6·3%.

Subsequently 22 other cases were recorded, of which 10 full descriptions could be traced and analysed. All had spontaneous deliveries. The only death recorded was that of a foetus with a prolapsed and non-pulsating cord. In 1 case with an incarcerated uterus delivery took place nearly at term. In 2 cases prolapse existed before pregnancy. In one of these, prolapse occurred in the 6th week of gestation (she had a history of prolapse during a previous pregnancy) and, in the other, prolapse occurred in the 28th week. In 6, prolapse occurred between the 32nd and 38th weeks of gestation. All ten cases were treated conservatively with bed rest and pessaries where necessary; 3 recovered completely.

Klawans and Kantor[10] make a strong plea for a rational and standardized approach throughout pregnancy. They added 4 case records in their valuable paper. In 2 cases a severe degree of prolapse existed before pregnancy and, in both, pessaries were used up to the 14th week. According to most writers prolapse after this stage is uncommon and yet it occurred repeatedly in both cases. Pessaries were then used throughout pregnancy and during labour until the cervix had dilated to almost 7 cm., i.e. virtually to its full extent. The pessaries were replaced immediately after labour to support the ligaments during involution. No infection was noticed before, during or after labour. Stabler and Conant disagree with the use of pessaries because of the danger of infection. Stabler preferred complete rest in bed for the first 3 months. After this period an occasional day in bed every week was sufficient. Vigilante and Bellinger report on a patient who had an abortion in the 22nd week during a previous pregnancy, and for whom a pessary could not be fitted then or now. She was confined to bed thoughout the pregnancy and she gave birth to a mature infant without intervention. Stabler suggests that it is possible to amputate a cervix successfully during pregnancy; the parts heal surprisingly rapidly and cleanly after simple colporrhaphy. He does not recommend the full Manchester repair and considers that to do less would be useless.

TREATMENT

Wherever indicated the condition of prolapse in pregnancy must be treated, even in young women, because the results in further pregnancies and deliveries under adequate supervision are quite satisfactory. Episiotomy may be necessary to avoid sudden rupture of the anterior or posterior vaginal wall (Stabler). In pregnancy it is important to correct the prolapse as soon as possible for fear of incarceration or abortion; if the condition has an acute onset, rest in bed with its foot-end raised will invariably reduce the oedema and the uterus can then be replaced into the abdomen after a day or two. Reduction under anaesthesia may be attempted if rest in bed fails to reduce the prolapse; such failure may however be an indication for therapeutic abortion in view of the dangers of foetal mortality, infection and dystocia. A subsequent repair operation should be performed if necessary. In some patients the condition persists or recurs, even after the 14th week. Good results have then been obtained both by using pessaries, usually of the Hodge type, under adequate supervision (which is less likely to disrupt the patient's everyday life), and by repeated or prolonged rest in bed (which is safer from the point of view of possible infection). During labour watchful conservatism should be employed; in many instances the cervix will dilate outside the body, when Dührssen's incisions and possibly the use of low forceps should suffice. The use of a pessary after returning the uterus to the abdomen after labour may be of great value, but it should not be allowed to be trapped by the involuting birth canal. Colpoplastic repair may be indicated after full involution, regardless of age and of whether the uterus is in the abdomen or not. In some older patients simultaneous hysterectomy may be considered. Some patients, particularly those with an unexpected spontaneous onset of prolapse, may recover completely after full involution.

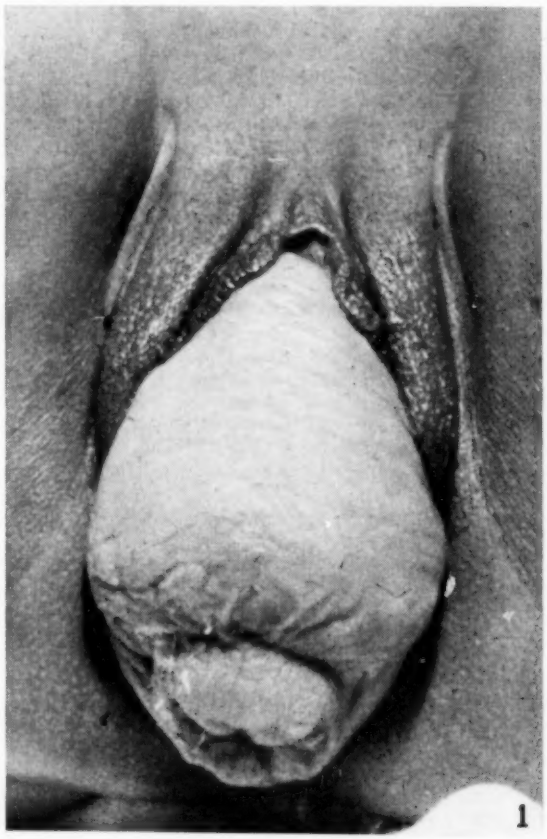

Fig. 1. Case 1.

CASE REPORTS

Case 1

A 24-year-old Coloured female was admitted on 14 February 1954 at the 28th week of gestation. She had one full-time normal delivery in 1952 with a bad tear which was stitched by her doctor. Soon after the present conception she noticed a protrusion at the introitus which gradually grew bigger and at 16 weeks her doctor inserted a pessary, which failed to improve matters (Fig. 1). For 3 months she experienced great difficulty with micturition. She had to push up the prolapse to initiate and complete the act, and she also complained of frequency and dysuria.

The patient was a healthy young woman with the fundus at 24 weeks. The cervix and part of the uterus were prolapsed outside the vagina; there was no cervical ulceration. The perineum was deficient. The urine contained numerous pus cells.

The patient was confined to bed and the prolapse repeatedly reduced. After 3 weeks she was allowed up. The blood-urea level had been 31 mg.% and the severe urinary infection responded only to chloromycetin therapy. Six weeks after admission she was sent to a convalescent home for 4 weeks, from where she was readmitted at 38 weeks. At 41 weeks she was delivered of a 7 lb. 12 oz. infant after a normal 18-hour labour. The puerperium was uneventful.

Five months after delivery she was readmitted complaining of 'something coming down', dyspareunia and stress incontinence. On examination a large cystocele, prolapse of the second degree, a large annular cervical erosion and a deficient perineum were found. A Manchester repair with buttressing of the bladder base was performed successfully. The histological examination of the cervix indicated chronic cervicitis. She was not seen again.

Case 2

A 28-year-old Coloured female presented on 24 October 1956 with sudden inability to urinate. She had had 3 normal full-term deliveries and was then 12 weeks pregnant. On examination her bladder was found to be distended to the umbilicus, the congested cervix protuded just beyond the vulva, and the prolapsed uterus was incarcerated. Catheterization was performed with some difficulty. The patient was then instructed to lie face-down with the foot of the bed raised and within a few hours the uterus lifted to the normal position. She was allowed up after a few days and discharged after a week. She also was not seen again.

Case 3

A 28-year-old Coloured female, who had had a normal full-term delivery previously, was admitted on 5 March 1954, 5 hours after a normal full-time delivery, complaining of 'something which dropped out after the delivery'. Examination revealed a prolapsed postpartum uterus (Fig. 2). Both the patient and the midwife stated that the prolapse occurred after delivery of the placenta. The uterine prolapse was reduced and the patient discharged. Two months later she was quite well and there was no sign of any genital prolapse.

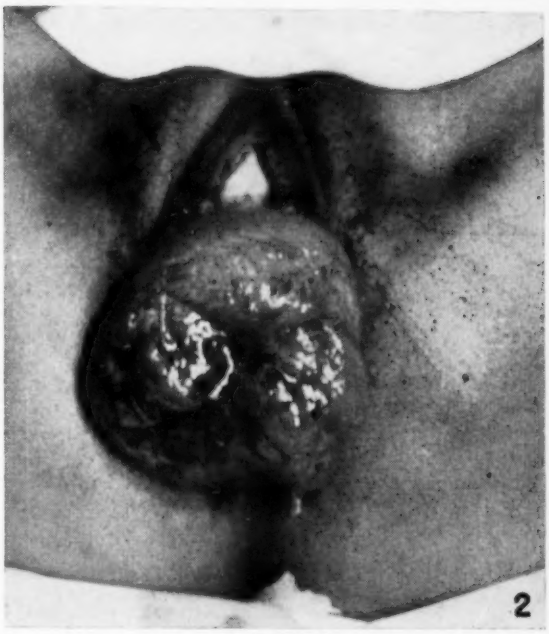

Fig. 2. Case 3.

SUMMARY

1. The rare condition of prolapse of the cervix and uterus in pregnancy is described, with a review of the literature. No previous comprehensive report in the literature could be traced.

2. Three case records are presented. The first is the record of a typical case; the second case presented with urinary obstruction, and the third with postpartum prolapse, which has not been described before.

SAMEVATTING

1. Die seldsame toestand van prolaps van die cervix en uterus met swangerskap word beskryf—vir die eerste keer sover vasgestel kon word. 'n Oorsig van die literatuur oor die onderwerp word verskaf.

2. Drie gevallestudies word aangeteken; die eerste is 'n tipiese geval, die tweede toon versperring van die urineweë, en die derde is 'n geval met postpartum prolaps wat, sover bekend, nog nie vantevore beskryf is nie.

My thanks are due to Prof. James T. Louw for his advice and constructive criticism, and to Dr. N. H. G. Cloete, Medical Superintendent of the Groote Schuur Hospital, for permission to publish.

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BRUCELLOSIS IN KRUGERSDORP, WITH A REVIEW OF THE PROBLEM IN SOUTHERN AFRICA

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'Brucellosis is a disease of mistakes. If we do not think of it we miss it, or we may think of it and test for it, yet find nothing. It eludes us. Nevertheless, as a cause of pyrexia of undetermined origin it is important, an obscure headache, lassitude, abdominal pain or arthritis may be due to its smouldering activity.'[1]

Dr. Wallis's apt description of a baffling disease is illustrated

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in the following reports of cases in Krugersdorp, Transvaal:

Case 1

A male European, aged 43 years, underground mine surveyor. In September 1946 had his tonsils removed for rheumatism. About March 1957 he had tick-bite fever with 2 tick-bite marks. Later he had pains in the back, and was diagnosed as having rheumatism. On 15 May 1957 he perspired excessively underground and came up to report ill. He had fever and chills for 4 days and was admitted to the Krugersdorp Provincial Hospital on 20 May under the description 'pyrexia of unknown origin'. He was given terramycin, 250 mg. 4-hourly. A specimen of blood submitted for agglutination tests on 21 May 1957 was reported by the SAIMR as agglutinating *Brucella melitensis* positive 1/50, end titre 1/400, *Br. abortus* positive 1/50, end titre 1/800, *B. proteus* positive 1/50.

He was discharged on 29 May feeling much improved. Repeat blood agglutination tests on 12 June 1957, gave *Br. melitensis* positive 1/50, end titre 1/400, *Br. abortus* positive 1/1600. The increasing high titres were taken as diagnostic of *Br. abortus*, but unfortunately no blood culture was performed during the stage of pyrexia. Agglutination tests on his family of wife, 3 children and mother-in-law (all resident in the same house) gave negative results.

The patient has a small agricultural holding at Chancliff Plots, Krugersdorp. Although he and his family live in the mine house, he spends much of his spare time on his farm, where he has a few pigs and 3 cows, whose milk supplies his own family and a few friends. The animals were examined by our veterinary officer, who reported that a Jersey cow was positive to contagious abortion on blood agglutination tests carried out by Onderstepoort laboratory. The animal was slaughtered. Blood agglutination of two persons supplied from this milk source were negative (SAIMR).

Case 2

On 24 July 1957 another case of Malta fever was notified—a male European, aged 18 years, apprentice fitter and turner in Krugersdorp. He had suffered from backache, which he attributed to the lifting of heavy iron rails at work. He was admitted to Cottesloe Hospital as a possible WCA case—injury to back. He developed pyrexia while in hospital. Blood agglutination, 12 June (SAIMR): *Rickettsia prowazeki* negative, *R. mooseri* positive 1/10, *R. rickettsii* negative, *R. burneti* negative, *R. akari* negative; on 14 June *Br. melitensis* positive 1/100, *Br. abortus* positive 1/200, Widal negative, Weil-Felix negative; on 20 June *Br. melitensis* positive 1/400, *Br. abortus* positive 1/400.

This patient's father is a friend of case 1, living on a neighbouring farm. He (the father) owns a cow which gives a blood agglutination test positive *Br. abortus* (29 August 1957). As from 1 March 1957, he supplemented his family's raw-milk supply from the herd of case 1. The milk from the town dairy which he owns is also not pasteurized. His son, case 2, is the member of the family most given to the drinking of raw milk.

Case 3

A Meat Control official at Krugersdorp abattoir, had brucellosis and was treated as a WCA case. He is a clerk, occasionally handling meat as part of his duty as issuing officer.

Case 4

On 7 November 1946 we were notified of a case of Malta fever in a 20-year-old immigrant Native mine labourer from the Portuguese North East Coast. Details are not available.

Case 5

An Angola Native mine labourer, he had worked 3 months at the West Rand Consolidated Mine when he developed 'pyrexia of unknown origin', enlarged spleen and liver, backache, and subacute arthritis of the knee. In March 1953 his agglutination report (SAIMR) was *Br. abortus* negative. He returned to hospital in May 1953 with an acute arthritis of the left ankle. Blood agglutinations (SAIMR) were *Br. melitensis* and *abortus* positive more than 1/6400; June 1953 the same result. He recovered on 46 capsules of 250 mg. of chloromycetin given over a week and did not return to hospital. His contract expired 7 months later. This was taken as a case of *Br. melitensis* infection.

Case 6

A medical man and his family came over from Canada on a cargo vessel shipping cattle in 1953. A few months later his wife developed undulant fever with arthritis of the knee joint, for which she was treated in Johannesburg. The case was not notified.

Case 7

A veterinary surgeon who fell ill in December 1950. He was confined to bed for 10 days with severe muscle and joint pains and extremely bad headache. Blood was positive (SAIMR) for *Br. abortus bovis* and *Br. melitensis* (titres not available). A 7-day course of aureomycin effected improvement

Case 8

Another veterinary surgeon, who contracted undulant fever in June 1950, with general malaise, headache and nausea. Blood tests: *Br. abortus* positive, *Br. melitensis* positive. A 4-day course of aureomycin effected improvement. Again in 1952 he had a milder attack of listlessness, continuous vague headache and malaise. Blood tests: *Br. abortus* positive and *Br. melitensis* positive. Patient elected to have no treatment because he preferred a state of immunity to develop rather than to sterilize his blood and render himself susceptible to reinfection.

It is considered that cases 7 and 8—veterinary surgeons in private practice at Krugersdorp—contracted the disease from cows while manually removing retained placentas. The route of infection may have been percutaneous or conjunctival.

Case 9

A Ventersdorp farmer, who had 1,000 cattle and frequently assisted his animals with calving, developed right-sided rheumatism with listlessness. He consulted a succession of doctors. A family friend, a veterinary surgeon, suggested brucellosis, and blood agglutination tests proved brucella-positive. Laparotomy was performed in a Johannesburg hospital in March 1950, revealing hard liver nodules and carcinoma of stomach, and also two liver abscesses containing *Staph. albus*, haemolytic streptococcus and *B. coli* on culture. He died in the following month from carcinomatosis.

Case 10

A farmer and business man, father of a health inspector in my department. In September 1942 he developed such pains in the shoulders that he could not put on his pyjama jacket. He felt as if he had a bad cold. A morning fever of 104°F would drop in the afternoon. He was severely ill until January 1943, when he was admitted to the Krugersdorp Hospital for special investigation. Blood tests were *Br. abortus* positive. He received 5 injections of killed brucellosis vaccine prepared by the SAIMR. On the second injection the fever subsided and he was cured.

Dr. J. L. B. Marais states that he remembers offhand at least 10 other cases, mostly from country areas surrounding Krugersdorp, that he has diagnosed as having brucellosis over the past decade. Case 10 is his only case that responded to brucella vaccine, subsequent cases having received antibiotics.

AFRICAN LITERATURE

The South African, Southern Rhodesian and Central African literature confirms that brucellosis abortus bovis has long been widespread, both among humans[2] and among dairy herds. Brucellosis melitensis, a more virulent infection, is encountered to a lesser degree and is known in South West Africa.

In 1937, Campbell and Greenfield,[3] of Cape Town, found the incidence of *Br. abortus bovis* to be 9·37% in patients with pyrexia of unknown origin. In 1939, Barnetson[4] found that out of 209 human sera submitted to the SAIMR, Johannesburg, from the Orange Free State, 1% gave a positive agglutination in a titre of 1 in 50; the corresponding percentages for the other regions were: Witwatersrand 1·9%, rest of Transvaal 5%, Cape Province 1·1%, South West Africa 24·9%.

Lewin, Bersohn and Richardson,[5] in 1948, reported 70% presence of brucella agglutinins in a total of 212 composite

samples of milk on the Witwatersrand submitted to whey agglutination tests. Of the 92 samples of milk tested, 3 were found to contain live brucella organisms. Human serum agglutinins were present amongst 200 normal blood donors as follows: 3 in 1/40 titre, 1 in 1/20 titre, and 4 in 1/10 titre. They suggest 1/100 as a diagnostic titre of active infection on the Witwatersrand. Meara[6]—Johannesburg 1950—reported 16·1% of 217 samples of milk as containing live *Br. abortus*.

Bevan[7] (1955) reports a number of dairy-herd outbreaks in Southern Rhodesia since 1905. Besides bovine, he describes many human cases, and the difficulties he met in getting the occurrence of human cases accepted by the medical profession. He mentions two butchers becoming infected, and one farmer who developed infection of his seminal vesicles, a very common site of infection in bulls. He emphasizes that the disease is not always recognized but is mistaken for influenza, rheumatism, tuberculosis, malaria and a dozen other complaints. The problem calls for the closest cooperation between the medical and veterinary professions.

Daneel and Meyer[8] describe a case of abortus fever in a Zulu male aged 32 years presenting as headache with weakness and abdominal pains. Eales[9] describes *Br. melitensis* infection of an 11-year-old Coloured boy of Rehoboth, South West Africa, presenting as an arthritis of the hip joint. The boy was in the habit of consuming large quantities of goat's milk. Trevor Jones,[10] in a brief survey of the orthopaedic aspects of brucellosis in Central Africa, describes its protean bone and joint complications, many crippling in effect. The chronicity of skeletal brucellosis, such as spondylitis, has been stressed and its resistance to treatment. No specific cure for the chronic case is known.

Treatment

In the treatment of human cases most authors[9-11] endorse the efficacy, especially in acute cases, of aureomycin, terramycin and chloromycetin, sometimes combined with streptomycin and cortisone. Latterly cathomycin has been held to be most effective in Malta fever. There is little or no response to penicillin, sulpha drugs, arsenicals or atebrin.[12] Antigen therapy is still in dispute but may be useful.

The treatment of chronic cases is difficult. General measures, vaccines, serum from immune donors, and hyperthermia, have yielded variable and often disappointing results.

Diagnosis

No reliable, early, quick diagnostic test for brucellosis has been developed. 'All tests other than culture—particularly the skin test—must be interpreted with caution, and negative laboratory tests do not exclude the presence of the disease.'[13]

A leucopenia with a low polymorph count may be suggestive.

(*a*) *Culture tests*. Our most decisive criterion is the isolation of the organism in culture. Because of the frequent early disappearance of brucella from the blood stream, specimens of urine and stool, blood, bone marrow, joint fluid, lymphatic gland, or splenic puncture material, must be submitted for culture at an early stage of pyrexia. This is not being sufficiently practised. Special laboratory culture-methods are required. Carrere and Roux, in France, have obtained up to 30% positive blood cultures in chronic cases, using a 5-day chick embryo as culture medium. Where positive cultures are obtained, identification of the brucella strain and investigation of the animal source is desirable. The primary culture of organisms may require from 5-10 days up to 4 weeks.

(*b*) *Animal inoculation* (guinea-pigs) should be reserved for difficult cases.

(*c*) *Agglutination tests*. 'Absence of agglutinins is without significance. In the chronic phase of brucellosis the finding of a positive blood agglutination reaction in a significant titre is the exception rather than the rule. Brucella has been cultured by many workers from patients with negative blood-agglutination reactions.'[13] Repeated early and late agglutination tests (with a wide range of titres to avoid negative agglutination zones) are advisable; a rising titre of brucella agglutinins is helpful in diagnosis. Positive agglutination results may be delayed 30 days and longer after initial symptoms, or they may never be obtained. In cases where antibiotics have been given in the acute phase, the patient may escape the initial diagnostic net of clinician and laboratory. Brucella antigens may persist for years in humans. Fleeting positive blood tests are sometimes produced by the ingestion of milk or meat containing dead organisms. 'In animals the agglutinin is the first to appear in the blood, followed in a few days by the complement-binding substances. They disappear from the blood in the same order.'[14] Abortus and suis strains cannot be differentiated by means of agglutination tests. 'It is an erroneous concept that lessening of the agglutination titre is of favourable prognostic import.'[13]

(*d*) *Allergic tests*. A multiple-puncture device (Allen and Hanbury) used for the intradermal test with 1,000-fold concentrated brucella solution is reported by Wallis[1] to be more reliable than the routine intradermal test. It must be borne in mind that allergic tests may upset agglutination results and therefore should be delayed. The size of an allergic reaction is not an index to immunity.

(*e*) *Other tests* such as the opsonocytophagic test[13] measuring the phagocytic power of the white cells to brucella are difficult and not so reliable.

Viability[14, 15]

Brucella organisms are most frequently found in the cream layers of milk. They may survive 2-15 days in sour milk, 2 weeks in chilled milk and butter, 2 weeks in animal flesh, and up to 147 days in the animal afterbirth. In overripe cheese they cannot be detected. Under conditions of desiccation *B. abortus* will perish in 3 days. Brucella is rapidly destroyed by sunlight and by most ordinary disinfectants; *Br. abortus* will withstand heating at 55°C for 20 minutes. In urine, and dried cow dung, brucella dies in 24 hours but in moist dung it survives for 75 days.

Occurrence and Transmission in Animals

Brucellosis affects only sexually mature animals, susceptibility being greatest during periods of gestation and lactation. Non-pregnant cows and maiden heifers are not so readily infected, and rarely become carriers after infection. After one abortion the animal is unlikely to abort again, but may remain infected for life. Generally, the organisms disappear from the uterus a few weeks after abortion or parturition.[15]

Br. abortus possesses special predilection for embryonic tissue, placenta and placental fluids, which are invaded during pregnancy; but subsequently the organisms lodge in the udder of the cow, in the testicles, epididymis and seminal vesicles of the bull, and in various lymphatic glands. The mucous membranes of the uterus and the ovaries apparently remain

free from invasion. Even when large numbers of *Br. abortus* are eliminated with the milk the mammary tissue may remain perfectly healthy.[15] Of infected cows, *Br. abortus* has been found in the pregnant uterus, uterine and vaginal discharges, foetal parts, lochia, afterbirth and membranes of live and dead calves, and the urine. It has also been found in the faeces of a calf feeding on infected milk, and in the semen of a bull whose epididymis and testicles were infected.

According to Huddleson,[16] brucellosis is sometimes transmitted by mosquitoes and biting flies. The incubation period in bovines varies from 14 to 227 days. The usual portals of entry are intestinal and through the skin. Conjectival inoculation may be successful. Sexual transmission by mechanical means is possible.

Br. melitensis, *Br. abortus bovis* and *Br. abortus suis* are not confined to goats, cattle and pigs respectively; cross infection of animals occurs. *Br. abortus* may affect other domestic animals such as pigs, equines, sheep, dogs, ducks, turkeys, pheasants and fowls. Guinea-pigs are highly susceptible. There is much justification for the view that the various strains of the genus *Brucella* should be regarded as varieties.

VETERINARY AND PUBLIC HEALTH CONTROL

The Public Health Act 1919 makes Malta fever a notifiable disease in South Africa, but has not been amended to cover the modern terminology of brucellosis. This partly explains the failure to notify on the part of practitioners, who probably consider that 'Malta fever' means *Br. melitensis* infection and does not include *suis* and *bovis* strains. Only 4 cases have been officially notified in Krugersdorp since 1933; knowledge of the other cases has been gleaned by questioning colleagues and members of the public.

Contagious abortion has not been included amongst the scheduled diseases in the Stock Diseases Regulations since 1919.[15] 'It is strange that the Public Health Act was promulgated at the same time as the stage was being set for relaxation of veterinary control of brucellosis and the subsequent alarming increase in South Africa.' 'It now surpasses by far in veterinary economic importance the majority of maladies at present included in the Stock Diseases Act.'[15]

Immunization of Herds[16]

For the immunization of herds the attenuated *Br. abortus* strain No. 19 is used as a vaccine for calves between the ages of 4 and 8 months; it protects at least 90% against the natural disease during the first pregnancy, and a high degree of immunity persists during the second and third pregnancies. Vaccination of calves, maiden heifers and non-pregnant cows does not lead to the establishment of the organisms in the animal body, and does not produce carriers. The sera of calves and young heifers react positively for not more than a few months after the inoculation, which obviates any confusion that may result if the agglutination test is later applied for diagnostic purposes.

If adult cattle are vaccinated with this attenuated strain, the resulting resistance is equal to that produced in calves. In pregnant animals there is some danger of abortion. The agglutinins may persist in the animals' serum so that the agglutination test cannot subsequently be used for diagnostic purposes. Vaccinated animals are not considered to be a source of infection. A second vaccination is recommended after a year or two.[15]

Infections of humans with *Br. abortus* occurs in laboratory workers and in persons that handle infective material. The infection is said to occur most commonly by the cutaneous route. In Russia a special variant of strain 19 is used for the protective inoculation of humans. More than a million persons have been inoculated, apparently with success.

Milk-borne Infection

Pasteurization or boiling of milk is the only satisfactory safeguard against the milk-borne spread of brucellosis, as of tuberculosis.

'At Seattle, Washington, in 1937, a man who had contracted brucellosis from infected milk was awarded 1,946 dollars in a suit against the company which distributed the milk, and the farmer who produced it (Harris—1941, 1950[13]). In London, in 1939, a man was awarded £195 damages against a dairyman in a similar suit (*The Times*, 1939).'[1]

According to van Drimmelen, of Onderstepoort, the use of the *Br. abortus* ring test on fresh incoming milk at urban depots may to some extent assist in locating sources of infection, but is not so accurate as the blood agglutination test.

Tuberculous disease of the joints is common in Native children of the Border Area, Eastern Cape. I suggest that some of the children that are diagnosed as suffering from this condition are cases not of tuberculosis but of brucellosis.

SUMMARY

A series of Krugersdorp cases of brucellosis bovis is described.

The Central and South African medical literature on brucellosis among animals and humans is briefly reviewed.

Brucellosis is widespread and likely to be conveyed by our daily raw-milk supply; heat treatment of milk is our most satisfactory public-health safeguard against milk-borne infection of animals and humans alike. Raw milk should be sold only from herds certified as free from brucella infection.

Percutaneous infection of persons handling infected animals is well known.

Serious bone and joint complications are recorded.[4] Brucellosis is more important in public health than we are wont to believe.[17]

Brucellosis may be confused with influenza, tuberculosis, typhoid, rheumatism, septic sore throat, malaria, disc lesions, other joint infections and epididymal infections, etc.[5]

Few of the overt human cases are being reported. Searching and authoritative investigation of the incidence of human cases is called for, especially in country areas. Reference is made to protective inoculation as a means of securing immunity in dairy and other herds. Too much reliance should not be placed on this procedure for reinfection is known to occur.

General practitioners, health departments and veterinary surgeons are urged to keep one another informed of the occurrence and behaviour of brucellosis.[6]

I wish to thank the following colleagues for collaboration in the preparation of case histories: Dr. A. Loubser, who originally stimulated my interest in local cases of brucellosis (cases 1 and 7), Dr. M. Rosenberg (case 2), Dr. Manfred I. Levin (case 3), Dr. A. J. Halliday (cases 4, 5 and 6), Dr. J. J. de Waal (case 9), and Dr. J. L. B. Marais (case 10). I also wish to thank Dr. U von Backström, B.V.Sc., for help and advice and, in connection with case histories 7, 8 and 9, Dr. L. W. v. d. Heever, B.V.Sc., for access to Germiston investigations and Mr. W. Hartman for environmental investigations.

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TUBEROUS SCLEROSIS : CASE RECORD AND DISCUSSION

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In this article we report a case of the relatively rare condition known as tuberous sclerosis, and add a brief description of the salient features of published cases with particular reference to radiological findings.

CASE REPORT

A European boy aged 11 years 9 months was brought to the Children's Hospital because of fits which he had been having since the age of 18 months. These fits consist of an aura with frequent repeating of words and rapid clenching of his hands. There is no cyanosis or crying. He usually staggers or falls to the left and there is a loss of consciousness lasting 3-10 minutes. He has had as many as 17 of these attacks in a day and at other times 1 or 2 per week. Between these attacks the boy leads a reasonably normal life. He is fond of music and reads and draws well. He attends a special school, being mentally retarded.

Family History. The mother was ill during her pregnancy but cannot say what was wrong. Delivery was with forceps but the child was well at birth. Two siblings are normal. There is no history of epilepsy in the family. The mother has a similar skin condition on her face to that of the boy (Fig. 1).

Examination. The child appears to be mentally dull and retarded, clenching and rubbing his hands all the time. As he was being admitted he jumped from a 10-foot balcony, fracturing a cuboid; soon afterwards he bit a thermometer. Adenoma sebaceum is present on the face (Fig. 1). Nothing of note found in the central nervous, cardiovascular and respiratory system, the ear, nose and throat, the abdomen and skeleton.

Special Investigations

Cerebrospinal Fluid. No cells, chemically normal, protein normal, Wassermann reaction negative.

Electro-encephalogram. Random delta theta frequencies and dominating all leads. Minimal amount of 8 c/s alpha activity was recorded at low amplitude over the central and post-central areas. Frequent short episodes of typical slow waves and spikes were recorded at high amplitude in all leads over both hemispheres. This abnormal EEG is regarded as consistent with the diagnosis of tuberous sclerosis.

Fig. 1. Picture of the patient and his mother. Note the adenoma sebaceum of the face, more marked in the boy.

Radiological Examination

Chest normal.

Intravenous Pyelogram. The kidneys excreted the dye normally. The collecting system on the right side was normal. On the left side there was some thinning of the pelvic-calycal system suggesting some pressure from the kidney parenchyma. No calcification could be seen in the kidneys.

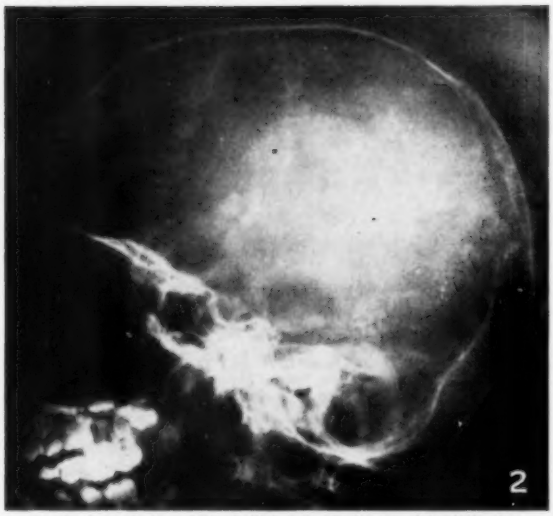

Fig. 2. Lateral view of the skull showing the intracranial calcification.

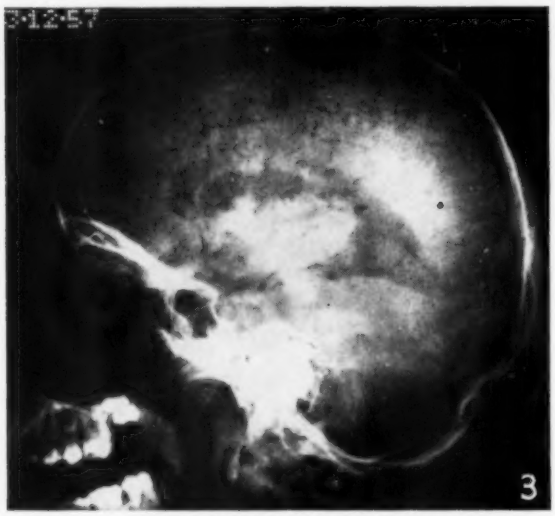

Fig. 3. Lateral view of the air-study showing the close association of the calcification with the lateral ventricles.

Skull. The straight films of the skull show some calcification just anterior to the coronal sutures in the lateral view (Fig. 2) and close to the mid-line in the antero-posterior projection. Air studies of the ventricular system (Figs. 3 and 4) show that this calcification is adjacent to the infero-lateral walls of the lateral ventricles. The characteristic 'candle guttering' described in the literature was not well shown in this series of films.

Hands. A small cystic area with clear-cut margins is present in the tuft of the terminal phalanx of the left third finger; similar but less clearly defined, cystic areas can be seen in the terminal phalanges of the right index and fourth fingers (Fig. 5). The wavy periosteal reaction in the phalanges described in the literature as being characteristic of the condition is not seen in these films.

DISCUSSION

The condition of tuberous sclerosis was described as far back as 1880 by Baurneville. It was so named because of the potato-like lesions in the brain which form the basis of its pathology. These lesions are smooth, white and fairly hard.

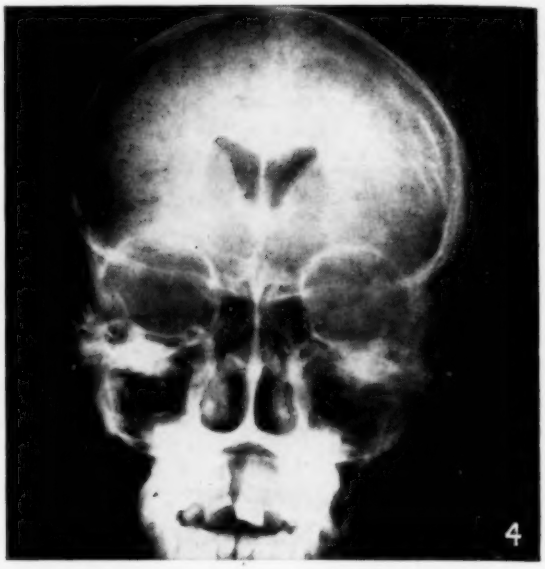

Fig. 4. Antero-posterior view of the air-study showing the relationship of the calcification to the lateral ventricles. This is seen far more clearly in the original X-ray film.

Radiologically, tuberous sclerosis is most commonly associated with calcification in the brain, usually in the region of the basal ganglia. Of a series of 43 cases Holt and Dickerson[1] found this feature in 50%. The lesions may at times be seen to project into the ventricles and when this is shown with air-studies Ross and Dickerson[2] regard it as pathognemonic.

Clinically, the patient with tuberous sclerosis presents himself with facial adenoma sebaceum, mental retardation and epilepsy or convulsions, but not all of these features need be present at the same time. The mother of our patient has facial adenoma sebaceum but is mentally normal and radiologically negative.

Retinal tumours (phakomas) are said to be fairly common in this condition, and also renal tumours, which usually consist of a proliferation of mesothelial elements including muscle, fat, fibrous tissue and vessels. Cysts have been seen to occur in most of the viscera, resulting in a wide variety of clinical manifestations.

Our case shows osseous lesions in the fingers which are seen far less frequently than intracranial calcification. Holt and Dickerson,[1] in their admirable paper on the osseous lesions of tuberous sclerosis, state that 66% of 30 patients who had X-rays taken of their hands and feet showed local cystic lesions in the phalanges with or without associated periosteal formation of new bone in the metacarpals or metatarsals. This periosteal process presents a 'wavy' appearance, they say. Ackermann[3] has reported cases of tuberous sclerosis with very striking osseous manifestations, but our case does not show these changes.

Fig. 5. Film of the hands showing the cystic lesions in some of the phalanges. The one in the terminal phalanx of the left 3rd finger is particularly well seen.

SUMMARY

A case of tuberous sclerosis in a boy of 11 years is described.

The case presented with adenoma sebaceum of the face associated with mental retardation and fits.

The radiological features included intracranial calcification adjacent to the lateral ventricles. Osseous manifestations were found in the phalanges of the hands.

Some of the main features of the condition are described.

We wish to thank Dr. K. F. Mills, Superintendent of the Johannesburg Hospital, and Dr. J. L. Parnell for permission to publish this case. We also thank Mrs. Hill, of the General Hospital X-ray department and Mr. Schevitz, of the Medical School, for assisting with the reproductions.

We should like to add that this case was first seen in the outpatients department of the Children's Hospital by Dr. Johann Theunissen who, but for his untimely death, would have been associated with this publication.

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OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

CONVEYANCE OF MEDICAL SUPPLIES BY DOCTORS

In reply to an enquiry by the Associate Secretary of the Medical Association of South Africa to the Secretary for Transport regarding the necessity for doctors to take out a licence (in terms of the Motor Transport Act No. 39 of 1930) for the conveyance of medical supplies in their own cars for use in their practice, the following letter was received on 24 December 1958.

'Dear Sir,

1. With reference to the representations made in your letter of 9 December 1958 to the Hon. the Minister for Transport regarding the conveyance of medical supplies by doctors, I have to inform you that conveyance, as defined in the following paragraph, does not constitute motor transport in terms of the Act (Act No. 39 of 1939).

"the conveyance by a person in the course of his profession, trade or occupation of documents, books, plans, instruments, tools, materials or other goods appertaining to that profession, trade or occupation, by means of a motor vehicle, if the goods so conveyed are not for sale or for delivery in pursuance of sale or for exhibition with a view to sale, but are needed for use by the conveyor in the carrying out of the functions or work in respect of which the journey is undertaken and if the motor vehicle used is designed primarily for the conveyance of not more than seven persons (including the driver) and their personal effects."

DIE VERVOER VAN MEDIESE VOORRADE DEUR GENEESHERE

In antwoord op 'n navraag deur die Medesekretaris (M.V.S.A.) aan die Sekretaris van Vervoer oor die vraag of dit nodig is vir 'n geneesheer om 'n lisensie uit te neem (in terme van die Motortransportwet Nr. 39 van 1930) vir die vervoer in sy eie motor van geneesmiddels vir gebruik in sy praktyk, is die volgende brief ontvang op 24 Desember 1958.

,Waarde Heer,

1. Na aanleiding van die vertoë in u brief gedateer 9 Desember 1958, aan Sy Edele die Minister van Vervoer, met betrekking tot die vervoer van mediese voorrade deur geneeshere, moet ek u meedeel dat vervoer soos hieronder uiteengesit nie motortransport kragtens die Motortransportwet 1930 (Wet Nr. 39 van 1939), soos gewysig, uitmaak nie:

„die vervoer deur iemand in die loop van sy beroep, besigheid of bedryf, deur middel van 'n motorvoertuig, van dokumente, boeke, planne, instrumente, gereedskap, materiaal of ander goedere wat by daardie beroep, besigheid of bedryf behoort, indien die aldus vervoerde goedere nie vir verkoop of vir aflewering ingevolge 'n verkoping of vir tentoonstelling met die oog op verkoop bestem is nie, maar deur die vervoerder benodig word vir gebruik by die verrigting van die werksaamhede of werk in verband waarmee die rit onderneem word eintlik vir die vervoer van hoogstens sewe persone (met inbegrip van die bestuurder) en hulle persoonlike besittings ingerig is', d.w.s. 'n gewone motorkar."

2. Volgens die uiteensetting hierbo sal u opmerk dat genees-

2. In terms of this explanation it will be clear that doctors, while carrying out their normal activities, are exempted from the obligation in terms of Act 39/1930, except when they convey supplies in supplementation of their stocks or where they use a different type of vehicle from that defined in the Act.

3. In cases where the activities of doctors do constitute motor transport they should apply to the Local Road Board concerned for indefinite exemption, i.e. exemption issued on payment of £1 for the period during which the vehicle is used for the purpose for which the exemption is granted.

Yours faithfully,

Secretary for Transport'

here met betrekking tot hulle normale bedrywighede, vrygestel is van die verpligtinge kragtens Wet 39/1930, behalwe in gevalle waar hulle goedere ter aanvulling van hulle voorrade vervoer of in gevalle waar hulle gebruik maak van 'n voertuig anders dan die hierbo uiteengesit.

3. In sodanige gevalle waar geneeshere se bedrywighede wel motortransport uitmaak kan hulle by die betrokke Plaaslike Padvervoerraad aansoek doen om 'n onbepaalde tydperk vrystelling, d.w.s. 'n vrystelling wat teen betaling van 'n bedrag van £1 uitgereik word vir solank as wat die betrokke voertuig gebruik word vir die doel waarvoor die vrystelling uitgereik is.

U dienswillige,

Sekretaris van Vervoer'

42ND MEDICAL CONGRESS (M.A.S.A.), EAST LONDON, 27 SEPTEMBER — 3 OCTOBER 1959 : INTENTION FORMS: 42STE MEDIESE KONGRES (M.V.S.A.), OOS-LONDEN, 27 SEPTEMBER — 3 OKTOBER 1959 : VOORNEMENSVORMS

The Hon. Organizing Secretary of the Congress has informed the *Journal* that many practitioners who intend participating in, or visiting, Congress have not yet returned their 'Intention Forms' to the Congress Office. It would be appreciated if doctors would fill in their forms and return them to: The Hon. Organizing Secretary, 42nd Medical Congress (M.A.S.A.), Ensuco House, 10-12 Oxford Street, East London, without delay. A specimen form is set out below:

INTENTION FORM

(1) Do you intend coming to the 42nd Congress in East London?

(2) Will you be accompanied by your wife/husband?

(3) Do you wish accommodation arranged?

(4) If so—do you wish a Central or Beach Hotel, private bathroom, view of sea, private suite, etc.? Please give details.

(5) When are you to arrive and leave?

(6) Do you intend flying to and from Congress?

(7) Will you be attending the Banquet?

(8) Will you be attending the Ball?

(9) Will you be attending the Jewish Festivals?

(10) Which sport, if any, will you be taking part in?

NAME:

ADDRESS:

Thank you,

E. McCabe, M.B., Ch.B.
Organizing Secretary

Die Ere-Organiserende Sekretaresse van die Kongres het aan die *Tydskrif* meegedeel dat baie praktisyns wat wil deelneem aan die Kongres, of dit wil bywoon, nog nie hul ‚Voornemensvorms' na die Kongreskantoor teruggestuur het nie. Dit sal waardeer word as geneeshere hierdie vorms sal invul en hulle dadelik stuur na: Die Ere-Organiserende Sekretaresse, 42ste Mediese Kongres (M.V.S.A.), Ensuco-Huis, Oxfordstraat 10-12, Oos-Londen. 'n Voorbeeld van die vorm word hieronder gedruk:

VOORNEMENSVORM

(1) Is u van plan om die 42ste Kongres te Oos-Londen by te woon?

(2) Sal u vrou/man u vergesel?

(3) Moet losies vir u gereël word?

(4) Indien wel—verkies u 'n hotel in die middestad of by die see, private badkamer, uitsig op die see, private stel, ens.? Gee asb. besonderhede

(5) Meld verwagte tyd van aankoms en vertrek

(6) Maak u van lugvervoer na en van die Kongres gebruik?

(7) Sal u die Banket bywoon?

(8) Sal u die Bal bywoon?

(9) Sal u die Joodse Fees bywoon?

(10) In welke sportsoort, indien enige, meen u om deel te neem?

NAAM:

ADRES:

Dankie,

E. McCabe, M.B., Ch.B.
Organiserende Sekretaresse

INTERNATIONAL SOCIETY OF CARDIOLOGY FOUNDATION

STATEMENT OF AIMS AND PROPOSED ACTIVITY

In 1957 the International Society of Cardiology Foundation was incorporated in the city of Chicago, USA to facilitate the acquisition of funds for use by the International Society of Cardiology in the support of cardiovascular research, research fellowships, training and other important international opportunities and obligations in this field. A Board of Trustees and an Ad-

visory Council were appointed with the International Council of Cardiology in support.

The aims of the International Society of Cardiology Foundation are to stimulate and support, in close cooperation with the International Society of Cardiology, the following activities: (1) International cardiovascular research, (2) international cardiovascular research fellowships, (3) international cardiovascular training, and (4) international exchange of information about cardiovascular diseases including travel grants for individual cardiologists, international group conferences, and international congresses.

All of these aims demand high priority and should be equally supported with the accumulation of funds and with grants to the Foundation definitely allocated to one purpose or another. The acquisition of funds can be by contributions from individuals, from associations or foundations, and as grants from such major agencies, public and private, as the International Society of Cardiology, the National Heart Institute and National Advisory Heart Council of the U.S. Public Health Service, and the American Heart Association.

The programme of the Foundation will be conducted by the Board with the aid of the Advisory Committee, the International Council of Cardiology, and the Tripartite Committee (Research, Social Cardiology, and Nomenclature) of the International Society of Cardiology.

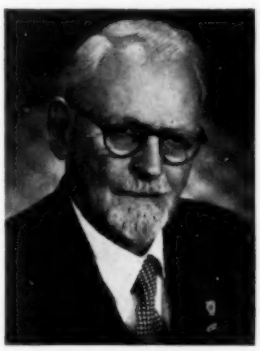
Contributions may be made directly to the International Society of Cardiology Foundation, Dr. Louis N. Katz, Treasurer, Michael Reese Hospital, Chicago, Illinois, or to the International Society of Cardiology, Dr. Vittorio Puddu, Secretary-General, Via Savoia 86, Rome, Italy. The Finnish Heart Association recently donated $1,000 to the programme of the Foundation and it is hoped that this will be an example to other heart associations throughout the world.

IN MEMORIAM

CAREL THEODORUS MOLLER, L.R.C.P. & S. (EDIN.), L.F.P.S. (GLAS.), M.B., CH.B., F.R.C.S. (EDIN.)

Mr. D. E. Mackenzie, F.R.C.S. (Edin.), of Johannesburg writes: On 13 January 1959, at the age of 82, Carel Theodorus Moller passed away after a short illness. With his passing goes not only one of South Africa's great doctors, but also one of our great men.

Born in Graaff-Reinet, Cape, in 1876 and educated there, Dr. Moller proceeded to Edinburgh University for his medical training. At the outbreak of the Anglo-Boer war, although his training was not complete, he returned to South Africa and served in an ambulance corps, which was later attached to General Smut's commando. At the end of hostilities, Dr. Moller completed his training and, after practising for short periods at Molteno and Standerton, started in general practice in Germiston in 1908. This practice, which became one of the largest in town, he relinquished it in 1935.



Dr. Moller

I was associated with him in his practice and know how greatly he was loved and respected, not only by his patients, but also by his colleagues. He was, moreover, a man with a very high ethical code and conscientious to the last degree. He could be stern when necessary, but his sterness was always quickly changed to gentleness, and there was a twinkle in his eye denoting a great sense of humour.

Dr. Moller held the appointments of District Surgeon, Germiston, from 1908 to 1935, part-time Medical Officer of Health 1912-1933 and first Superintendent of the Germiston Hospital—a post which he held until 1934. The Germiston Hospital was his 'baby'. He was Senior Surgeon for many years, as well as Superintendent, and I am certain that the high standard in the hospital today, and the fine spirit of friendliness and cooperation amongst the medical men, is largely the result of Dr. Moller's influence at this early date.

He later became interested in radiology, and was one of the pioneers in radiology in this country. He became a specialist, and was appointed radiologist to the Germiston Hospital, a post which he held until he retired in 1946. He was honoured for his work in radiology when he was appointed first life member of the Radiological Society of South Africa. He was Chairman of the Miners' Phthisis Appeal Board from 1933 to 1945.

Dr. Moller had many interests apart from medicine. He was Chairman of the Germiston Sporting Club, and in his later life he was also Chairman of the East Rand Engineering Company. He was a great reader, particularly of historical books and he always kept his medical reading up to date. He used to have great arguments with his children—one son is an orthopaedic specialist and a daughter is a doctor, one son-in-law is a radiologist, another a pathologist and another a general practitioner.

Dr. Moller enjoyed an ideal home life. He was a wonderful husband and father, and his home was always open. In March 1958 Dr. and Mrs. Moller celebrated their golden wedding anniversary. After his complete retirement, Dr. Moller settled on his farm near Krugersdorp and became interested in general farming.

During three of the difficult years of the last war, Dr. Moller was Mayor of Germiston, and carried out his duties in an untiring and unselfish manner. He was honoured with a civic funeral, and many of his old patients and old Native servants came to pay their last respects. As the *cortège* passed along the thickly lined streets, the *carillon* of the Germiston City Hall sounded the strains of 'Abide with Me'.

He leaves a widow, one son and 3 daughters and 12 grandchildren. To them we offer our deepest sympathy. Their consolation must be that his long life was rich with great accomplishments, both in medicine and in other fields. 'Well done, thou good and faithful servant.'

Dr. F. P. Fouché, F.R.C.S., of Johannesburg, writes: The death of Dr. C. T. Moller, has removed one who, although he became a well-known and eminent surgeon and radiologist, remained at heart a general practitioner throughout his career. To his patients he was always the loved and respected family doctor; he was their counsellor and advisor; the sharer of their pleasures and their sorrows.

Dr. Moller's interest in surgery lead him to take the Fellowship and to study radiology. He devoted much time and thought to gastric surgery, and visited different clinics in Europe to study the latest developments, which he expounded brilliantly. Towards the end of his active career, he devoted himself to radiology and, at the age of 62 years, visited London to study new techniques in that subject.

Dr. Moller was also one of the first general surgeons in South Africa to realize the importance of orthopaedic surgery. A generation ago, in 1925, when he was Superintendent and senior surgeon of the Germiston Hospital, he was instrumental in establishing an orthopaedic department there—one of the first in South Africa. An orthopaedic surgeon was appointed in charge of this department and orthopaedic cases, including the complicated fractures, were allocated to this new department. Soon afterwards, he organized a weekly fracture clinic, which was attended by all the medical men in the town and also by a physiotherapist. This, I think, was the first fracture clinic in South Africa.

We cannot value too highly these pioneering efforts of Dr. Moller and shall always remember the part he played in establishing orthopaedic surgery in South Africa. On behalf of the South African Orthopaedic Association, I wish to express our deepest sympathy to Mrs. Moller and her family. I have lost a great friend and the profession a shining light.

MR. CHARLES LEOPOLD DARLEY-HARTLEY

Mr. C. L. Darley-Hartley, who died on 23 December 1958 after a long illness, was known to a number of older members of the

Association, who remember him as the Business Manager during the days when Dr. C. Louis Leipoldt was Secretary of the Association and Editor of the *South African Medical Journal*.

Mr. Darley-Hartley was the son of the late Dr. W. Darley-Hartley who founded the *South African Medical Record* early in the century, and he assisted his father on the business side. When the Association took over the *South African Medical Record* to incorporate it in the *Journal of the Medical Association of South Africa* (as our journal was formerly known), the Association appointed Mr. Darley-Hartley as its Business Manager, a position which he occupied for some 17 years, retiring from the post at the end of 1944.

Mr. Darley-Hartley, while in the employ of the Association, carried out his duties very diligently and was popular with his colleagues at the Head Office. Unfortunately his health was not robust and after his retirement it deteriorated and was not improved by the strain of looking after an invalid sister who died some two years ago. Mr. Darley-Hartley was a very likeable personality and took a keen interest in the affairs and progress of the Medical Association. He was an enthusiastic bowler and took a prominent part in the administrative side of the Observatory Bowling Club.

His passing removes one of the few remaining links between the old and the younger generation of members of the Medical Association residing in Cape Town.

NEW PREPARATIONS AND APPLIANCES: NUWE PREPARATE EN TOESTELLE

BLENDTOME

Medical Distributors (Pty.) Ltd., of 252 Jeppe Street, Johannesburg, supply the following information about the Blendtome, a portable electro-surgical unit, manufactured by the well-known Birtcher Corporation of Los Angeles, USA.

The unit supplies 4 types of current: a tube-generated 'cutting' current that cuts with ease; a 'spark gap' that produces excellent coagulation; a 'monopolar' current for all techniques requiring fulguration and desiccation of shallow growths, and a 'blended' current when a combination of cutting and coagulation is required.

The Blendtome is the ideal unit for all types of minor surgery, particularly gynaecology, ear, nose and throat work, rectal surgery and dermatology. Cervical conization may be undertaken even when scar tissue is present and biopsy specimens can be resected without burning of the tissue.

The apparatus is fully guaranteed for 2 years, weighs just over 30 lb. and is reasonably priced at £125.

The sole distributors of Birtcher Equipment in South Africa, Medical Distributors (Pty.) Ltd., P.O. Box 3378, Johannesburg, and P.O. Box 3077, Cape Town, will gladly supply further particulars and arrange for a demonstration of the apparatus at your convenience.

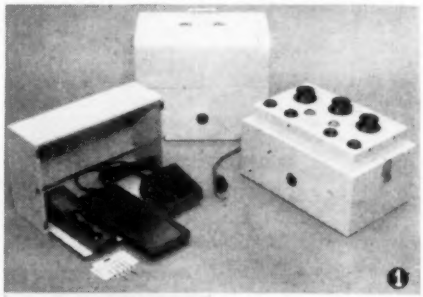


Fig. 1. Portable model—draagbare model.

Fig. 2. Office model on stand—kantoormodel op staander.

Medical Distributors (Eiens.) Bpk., van Jeppestraat 252, Johannesburg, verskaf die volgende informasie oor die Blendtome, 'n draagbare elektro-chirurgiese eenheid, vervaardig deur die welbekende Birtcher Korporasie van Los Angeles, VSA.

Die eenheid voorsien 4 verskillende strome: 'n elektroniese buisontwikkelde ‚sny'-stroom wat met gemak sny; 'n ‚vonkgaping'-stroom wat uitstekende stolling veroorsaak; 'n ‚eenpool'-stroom vir enige tegniek vir fulgurasie en dessikasie van oppervlakkige groeisels en 'n ‚gekombineerde' stroom wanneer 'n kombinasie van sny en stolling nodig is.

Die Blendtome is die ideale eenheid vir gebruik by minder ernstige operasies veral by ginekologiese, oor-, neus- en keeloperasies en operasies van die rectum en vir velgroeisels. Nekkonisasie kan gedoen word al is daar littekenweefsel teenwoordig en biopsiemonsters kan geneem word sonder dat die weefsel gebrand word.

Die apparaat is gewaarborg vir 2 jaar, weeg net oor 30 lb. en word verkoop teen die redelike prys van £125.

Die Uniale verspreiders van Birtcher-apparaat, Medical Distributors (Eiens) Bpk., Posbus 3378, Johannesburg en Posbus 3077, Kaapstad, sal met graagte verdere besonderhede verskaf, en reël vir 'n demonstrasie van die apparaat wanneer dit u pas.

PASSING EVENTS: IN DIE VERBYGAAN

Dr. Paul D. White, of Boston, Massachusetts, USA, President of the International Society of Cardiology Foundation and Chairman of the Research Committee of the International Society of Cardiology, is visiting Cape Town with Mrs. White from 11 to 31 March 1959. Dr. White will be the guest of the Students' Visiting Lecturers Fund of the University of Cape Town.

* * *

Research Forum, University of Cape Town. A meeting of Research Forum will be held on Tuesday 3 March at 12 noon in the large A-floor lecture theatre, Groote Schuur Hospital, Cape Town. Dr. H. Walton will speak on 'Personality change brought about by intensive group psychotherapy'. All interested are invited to attend.

* * *

Dr. M. J. Meter, M.B. (Pretoria), F.R.C.S. (Edin.), has commenced practice as a specialist orthopaedic surgeon at 207 Sanlam Buildings, Church Street, Klerksdorp. Telephone: Rooms 2106.

Dr. M. J. Meter, M.B. (Pretoria), F.R.C.S. (Edin.), het nou as spesialis-ortopediese chirurg begin praktiseer te Sanlam-gebou 207, Kerkstraat, Klerksdorp. Telefoon: Spreekkamer 2106.

* * *

Red Cross War Memorial Children's Hospital, Rondebosch, Cape. The next meeting in the Postgraduate Seminar Series of lectures held under the auspices of the University of Cape Town, Department of Child Health, will be held in the lecture theatre of this hospital on Wednesday 4 March at 5 p.m. Prof. C. E. L. Allen will speak on 'Mechanisms of deformity and their therapeutic approach'. All practitioners are welcome.

* * *

South African Paediatric Association. A meeting of the Cape Town Sub-group of this Association will be held on Tuesday 3 March in the Lecture Theatre, Red Cross War Memorial Chil-

dren's Hospital, Rondebosch, Cape, at 8.15 p.m. Dr. E. van der Burgh, radiologist, will speak on 'Some radiological aspects in the diagnosis of vomiting in infants and children'. The Annual General Meeting of the Sub-group will follow Dr. van der Burgh's lecture.

* * *

The National Cancer Association of South Africa have released for free distribution to the public a new bilingual public-education pamphlet entitled *What to know—What to do about Cancer*. This pamphlet will be issued upon request by the Head Office of the Association and its Branches in Bloemfontein, Cape Town and Durban. For further information contact the National Secretary, The National Cancer Association of South Africa, P.O. Box 2000, Johannesburg.

Die Nasionale Kankervereniging van Suid-Afrika het 'n nuwe tweetalige opvoedkundige pamflet: *Wat om te weet—Wat om te doen in verband met Kanker* vrygestel vir verspreiding onder die publiek. Hierdie pamflet sal op versoek gratis aan lede van die publiek beskikbaar gestel word deur die Hoofkantoor van die Vereniging en sy Takke in Bloemfontein, Kaapstad en Durban. Verdere inligting is verkrygbaar van die Uniale Sekretaris, Die Nasionale Kankervereniging van Suid-Afrika, Posbus 2000, Johannesburg.

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Dr. Cyril Wiggishoff, M.A., B.M., B.Ch. (Oxon.), F.R.C.S. (Edin.), F.R.C.S. (Eng.), formerly senior registrar to St. Peter's Hospital, London, and subsequently chief urological resident at the University of Illinois Hospital, Chicago, USA, has entered specialist urological practice with Dr. G. Clifford Thomson at 224 Lister Building, Jeppe Street, Johannesburg.

Dr. Cyril Wiggishoff, M.A., B.M., B.Ch. (Oxon.), F.R.C.S. (Edin.), F.R.C.S. (Eng.), voorheen senior registrateur te ‚St. Peter's Hospital', Londen, en daarna hoof urologiese inwonende mediese beampte aan die Universiteit van Illinois, Chicago, V.S.A., praktiseer nou as spesialis-uroloog saam met dr. G. Clifford Thomson te Lister-gebou 224, Jeppestraat, Johannesburg.

Dr. Louis Friedlander, M.B., B.Ch. (Rand), M.R.C.P. (Lond.), R.C.P. & S. (Eng.), formerly research fellow in paediatrics, Harvard Medical School, Massachussetts, USA, and the Children's Medical Centre, Boston, USA, and registrar at the Hospital for Sick Children, Great Ormond Street, London, has now commenced practice as a specialist paediatrician at 606 Medical Arts Building, Jeppe Street, Johannesburg. Telephones: Rooms 23-9258, residence 42-7936, emergency 22-4191.

Dr. Louis Friedlander, M.B., B.Ch. (Rand), M.R.C.P. (Lond.), R.C.P. & S. (Eng.), tot onlangs navorsingsgenoot in kindergeneeskunde te Harvard Mediese Skool, Massachussetts, V.S.A., en die ‚Childrens' Medical Centre' ‚Boston, V.S.A. en voormalige registrateur aan die ‚Hospital for Sick Children', Great Ormondstraat, Londen, het nou as kinderarts begin praktiseer te Medical Arts-gebou, Jeppestraat, Johannesburg. Telefone: Spreekkamer 23-9258, woning 42-7936, noodoproepe 22-4191.

* * *

The Ninth International Congress of Paediatrics will be held in Montreal, Canada, on 19-25 July 1959. Postgraduate students, introduced by their Department Heads, may attend the Congress at the reduced registration fee of $20.00 (full fee $40.00). All registrations should reach the Secretary General of the Congress at P.O. Box 215, Westmount, Montreal 6, Canada, by 30 April 1959. For the convenience of paediatricians from Europe, as well as those from Africa, Asia and Australia travelling *via* Europe, a collective flight at a considerably reduced fare to Montreal and back to Europe will be arranged (by KLM, Air France or Swissair). This flight will depart from Zurich, Paris, London and Amsterdam on 16 or 17 July and will return from New York on 8 August. The fare will be between SFr. 1345 and SFr. 1495 for economy-class accommodation, on condition that the full capacity of the aeroplane is utilized. Individual return fares will be approximately SFr. 2050, however and some first-class places will be available in the collective flight at a higher fare. The Secretary General of the International Paediatric Association will arrange with the governments concerned which persons will be considered as *bona fide* delegates to the Congress. For further information apply to the Secretary General, Prof. G. Franconi, International Paediatric Association, Kinderspital, Zurich 32, Switzerland.

BOOK REVIEWS : BOEKRESENSIES

DETERMINATION OF BLOOD GROUPS

The Determination of the ABO and Rh (D) Blood Groups for Transfusion. Medical Research Council Memorandum No. 36. (Revision of War Memorandum No. 9.) Pp. vi+46. 3s. 6d. net. London: Her Majesty's Stationery Office.

This small handbook (46 pages) first appeared in 1943 as War Memorandum No. 9, when it admirably filled the need for concise and practical guidance, a very real need which was occasioned at that time by the great upsurge in blood transfusion activities in both military and civilian practice.

The revised edition of this handbook is timely and welcome, since it is quite up-to-date, having been rewritten and expanded, without having lost in the process the balanced presentation of basic matter which so thoroughly justified its previous existence. As the title indicates, it is to cater for the need of those persons who have to give transfusions that the Medical Research Council produced this book. Fortunately, it has again succeeded admirably in its stated intention of setting out clearly 'the relatively simple, but essential, aspects of the subject which need to be known by all persons who bear responsibility, whether clinically or in the laboratory, for the giving of blood transfusions'.

The handbook sensibly confines itself to the Fisher symbols when dealing with the Rh blood group system. This practice has the merit of such simplicity as might persuade the uninitiated to take a second look at the subject, while at the same time the contents are thereby made available in familiar terms to the majority of the English-speaking world.

At the advertised price this handbook must surely represent as sound an investment as a medical practitioner and student of medicine can make today.

M.C.B.

CORRESPONDENCE : BRIEWERUBRIEK

IMMUNIZATION OF CHILDREN

To the Editor: I should like to congratulate you on your lucid and concise article in the *Journal* of 10 January,[1] dealing with the Immunization of Children. The answer given to this question is indeed most helpful, but I should like to comment on the contra-indications to poliomyelitis vaccine in allergic individuals and the suggestion of overcoming that difficulty. As you state, quite rightly, where 'a patient is known to be allergic to penicillin or other allergens, an antihistamine should be mixed with the vaccine and given at the same time'. However, the dosage for the antihistamine suggested (2 mg. chlortrimeton) appears inadequate.

Chlortrimeton added to penicillin or penicillin-containing injections, as well as to other protein-containing injections, has been most popular because, firstly its toxicity is negligible (massive doses can be and have been used with no ill effect other than drowsiness) and also its concentration (100 mg. per c.c.) allows of the addition of antihistamine to an injection without appreciably increasing the size of the injection. The use of this antihistamine added to penicillin (whether the injection material contains 10 or 1,000,000 units of penicillin, a sensitive patient will still show a reaction varying from a local erythema to a gross anaphylaxis) is extremely well documented in the literature dating from 1952, when Maslansky and Sanger added 10 mg. of chlortrimeton to each penicillin injection given, and in sensitive cases added 20 mg. of the antihistamine per injection. Since 1955 I have used chlortrimeton as a routine additive to all penicillin and poliomyelitis injections

in the dosage of 20 mg. of chlortrimeton per injection, and this drug has also been added as a routine, to all my diphtheria or triple-vaccine injections, in the dosage of 10 mg. per injection, irrespective of the patient's age. Even with this high dosage of chlortrimeton, I have experienced some local reactions at the injection site after polio vaccine injections, where the amount of penicillin per injection is negligible!

Chlortrimeton is relatively non-toxic (reports have appeared of children swallowing excessive doses of syrup, up to 4 oz., and of an infant who was injected with 100 mg. of this anti-histamine —with no ill effect apart from sound sleep for a prolonged period!). By adding chlortrimeton where any or all of these injections are administered to a child, one would expect a certain amount of drowsiness, but this side-effect is never sufficiently serious or noticeable to warrant comment by the child's parents.

I have given approximately 2,000 injections of penicillin, polio vaccine, and triple vaccine using chlortrimeton as a routine. My experience, in giving these injections, has been limited to the addition of high doses of this antihistamine and in spite of this I still encountered local reactions in sensitive patients in all three injections. It would appear, therefore, that the suggested dose of 2 mg. of chlortrimeton for each polio injection is inadequate.

Aaron Davidson

19 Judith Road
Emmerentia
Johannesburg
10 February 1959

1. Questions Answered (1959): S. Afr. Med. J., 33, 37.

TWO QUERIES

To the Editor: I should like to draw the attention of the Medical Association to the following, which, to me, appear to be quite unjust:

1. In the *Journal* of 31 January 1959 an appointment to the Red Cross War Memorial Children's Hospital at Rondebosch is advertised. The princely sum of £3 per 4 hours' work is offered! And it *will* be work; continuous for the whole 4 hours, usually without a tea break of even 10 minutes (15s. per hour). An electrician can and does command this sum, a mechanic gets the same. To offer it to a aoctor is an insult. I presume a man or woman of experience in pdediatrics is needed or does the phrase 'academic achievements' mean that a doctor who is 'unpractical, cold, merely logical'[1] will do? If so, he'd only be worth 15s. an hour!

2. Why is the comprehensive insurance on a doctor's car loaded with a 50% increase? I've found that doctors, as a class, take more care of their cars, are better drivers and have more regular servicing than any other member of the motoring public. Our cars are our most important instruments and we do not take risks with them.

Daphne Doris Ascough

P.O. Box 323
Kingwilliamstown
7 February 1959

1. Fowler, H. W. and Fowler, F. G. (1951): *The Concise Oxford Dictionary of Current English*, 4th ed., p. 7. London: Oxford University Press.

MEDICAL COUNCIL ELECTION

To the Editor: Allow me, through the correspondence column of the *Journal*, to thank my numerous colleagues for electing me to the South African Medical and Dental Council, thus showing once more their confidence in me.

I now enjoy the somewhat unenviable position of being the oldest Council member, i.e., in years, not in service. I trust, however that I shall be able to give another 5 years of service and can only add that I shall do my utmost to serve both the profession and the general public as I have tried to do during the last 10 years.

I regret that the thanks expressed in this letter are, for various reasons, somewhat belated but I assure my colleagues they are no less sincere.

James Black

323 Lister Buildings
Jeppe Street
Johannesburg
10 February 1959

PREDNISOLONE IN RHEUMATOID ARTHRITIS

To the Editor: The following case illustrates the value of prednisolone for advanced rheumatoid arthritis:

A patient, aged 35 years, suffered from rheumatoid arthritis for 10 years. The pain in her fingers and wrists was so severe in the mornings that she could not turn on an electric stove or cut bread. X-rays of the hands and feet showed advanced arthritic changes. She had received courses of solganol B oleosum with only slight alleviation of her symptoms. Cortisone caused nausea and dizziness. Treatment with prednisolone, starting with 30 mg. daily for 3 days, with gradual reduction to 15 mg. daily, caused immediate alleviation without side-effects. She could use her hands painlessly and there was a general improvement in her health. However, deprivation of the tablets for even a few days resulted in the return of stiffness to the fingers.

S. V. Humphries

c/o Barclays Bank
Brakpan, Transvaal
7 February 1959

BASAL-CELL CARCINOGENESIS

To the Editor: Over the past year we have been presented in this *Journal* with several papers[1-3] from the 'Combined Clinic' at Groote Schuur Hospital in Cape Town dealing with skin cancer in one or other form. While I am sure that this clinic provides a magnificent, if not actually a unique service in this country, there is a great deal of misleading matter in their publications which it is surely time to point out, particularly as publications from this source continue to appear.

We are told in two places that pigment in the skin is formed in the stratum granulosum of the epidermis. This error, though perhaps minor in an author-surgeon, is disquieting. Then, we have been introduced to a theory of skin cancer in which ultraviolet light is supposed to produce carcinogens in sebaceous glands which the light cannot reach in a black skin. Surely, if this could happen, the ultraviolet light can produce carcinogens just as easily in the surface lipid film whether the skin is black or white. This would dispose of the sebaceous theory without any more ado, were it not also for the fact that the dermis is left out of account, both as an absorber of ultraviolet light and a contributor to the development of skin cancer. Moreover, the theory of irradiated sterols as a factor in skin cancer is not the brain-child of the Cape Town clinic. The existing literature on this subject, none of it quoted, may be consulted by the authors of these papers with advantage to give them some idea of the objections they must overcome before the sterol theory is acceptable.

Leaving theoretical considerations aside, where the writers are evidently not at home, the clinical diagnosis of rodent ulcer is a subject on which I for one cannot share the confidence of the 'Combined Clinic'. Although I have not myself treated a thousand rodent ulcers as they have, I have diagnosed with histological confirmations several hundred consecutive clinically-certain and clinically-doubtful cases. From this experience the surprising result emerged that only in the clinically obvious cases was the histological confirmation of the diagnosis possible to the extent of 90-95%. The diagnostically difficult rodents comprised 40% of my cases. We read almost nothing of the morphoeiform or erythematoid types, the kerato-acanthomas, inflamed keratoses, naevoid multiple rodents of the face, cases resembling lupus erythematosus, cases with previously treated lesions, etc. that give one grounds for diagnostic caution. We would like some reassurance as to what becomes of such patients in Cape Town.

And now, in 1959, we read that ' . . . for the *first* time we can offer some positive practical suggestions to reduce the incidence of facial cancers . . . '. This advice, if you are a man, turns out to be that you ought to shave with an electric razor. At this stage I feel we must be on our guard against the fervent romanticism bred in the Mother City, that is to say, if we are not going to have our legs pulled.

G. H. Findlay
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1. Schrire, T. (1958): S. Afr. Med. J., 32, 520.
2. *Idem* (1958): *Ibid.*, 32, 997.
3. Schrire, T. and Sealy, R. (1959): *Ibid.*, 33, 97.